EXHIBIT 1

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF TEXAS
SHERMAN DIVISION

The State of Texas, et al., *Plaintiffs*, vs. Google, LLC, *Defendant.*	Case No. 4:20-cv-00957

EXPERT REPORT OF ITAMAR SIMONSON, PH.D.

July 30, 2024

TABLE OF CONTENTS

I. BACKGROUND, QUALIFICATIONS, AND ASSIGNMENT

A. Background and Qualifications

1. I served as the Sebastian S. Kresge Professor of Marketing at the Graduate School of Business, Stanford University, from 1993 through 2020. Since the beginning of 2021, I am the Sebastian S. Kresge Emeritus Professor of Marketing (while continuing to publish and serve as the co-editor of the Consumer Psychology Review Journal). A copy of my curriculum vitae, which includes a complete list of my publications, is attached as Appendix A.

2. I hold a Ph.D. in Marketing from the Duke University Fuqua School of Business, a master's degree in business administration (MBA) from the UCLA Graduate School of Management, and a Bachelor's degree with majors in Economics and Political Science from The Hebrew University.

3. My field of expertise is customer behavior, marketing management, the role of price, brand, advertising, and product features on judgment and behavior, research methods, the design and analysis of surveys and common survey mistakes, and human judgment and decision-making. Most of my research has focused on purchasing behavior, and the effects of product characteristics (such as brand name, price, and features), the competitive context, and marketing activities (such as promotions and advertising) on buying decisions.

4. I have published numerous articles in my career, which are listed in my C.V. (Appendix A); they deal with topics such as consumer decision making, the role of brands, customer decision making in the age of the Internet,[1] survey methods, and many other topics. I

[1] *See, e.g.,* Itamar Simonson and Emanuel Rosen (2014), *Absolute Value: What Really Influences Customers in the Age of (Nearly) Perfect Information*, HarperCollins Publishers.

have also co-authored a chapter on "Demand Effects in Likelihood of Confusion Surveys," in the ABA-published book entitled *Trademark and Deceptive Advertising Surveys*.[2]

5. I have received various awards, including (a) the 2007 Society for Consumer Psychology Distinguished Scientific Achievement Award; (b) an Honorary Doctorate from the University of Paris – Sorbonne University; (c) the award for the Best Article published in the *Journal of Consumer Research* (the major journal on consumer behavior) between 1987 and 1989; (d) the 1997 O'Dell Award, given for the *Journal of Marketing Research* (the major journal on marketing research issues) article that has had the greatest impact on the marketing field in the previous five years; (e) the 2001 O'Dell award (and a finalist for the O'Dell Award in 1995, 2002, 2004, 2005, 2007, 2008, and 2012); (f) the award for the Best Article published in the *Journal of Public Policy & Marketing* (the main journal on public policy and legal aspects of marketing) between 1993 and 1995; (g) the Ferber Award from the Association for Consumer Research, the largest association of consumer researchers in the world; (h) Elected Fellow of the Association for Consumer Research; (i) the 2016 American Marketing Association Award for the Exceptional Book that had a significant impact on marketing and related fields; (j) the 2002 American Marketing Association award for the Best Article in the area of services marketing; and (k) the 2016 Association for Consumer Research Conference Best Paper Award.

6. At Stanford University, I have taught MBA and executive courses on Marketing Management, covering such topics as brand management and brand equity, buyer behavior, developing marketing strategies, pricing, building brand equity, advertising, sales promotions, and retailing. I have also taught courses dealing with topics such as Marketing of High Technology

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2 Itamar Simonson and Ran Kivetz (2012), "Demand Effects in Likelihood of Confusion Surveys: The Importance of Marketplace Conditions," in *Trademark and Deceptive Advertising Surveys*, Chapter 11, Shari Diamond and Jerre Swann, Eds., American Bar Association.

Products/Services, Business-to-Business Marketing, and Critical-Analytical Thinking. Over the past several years, I have also taught an MBA course regarding "Applied Behavioral Economics," which examines the judgment and decision-making behavior and common errors/tendencies of managers, organizations, and consumers, financial decision making, and risk taking. In addition to teaching MBA courses, I have guided and supervised numerous MBA student teams in their work on company and industry projects dealing with a variety of markets.

7. All doctoral courses that I have taught over the past 33 years have involved educating students regarding proper and improper ways to conduct and evaluate consumer and managerial decision-making studies. For example, in addition to general principles of decision-making, the courses examine the various stages involved in a consumer survey, including defining the problem to be investigated, selecting and developing the research approach, collecting and analyzing data, and deriving conclusions. In each class meeting, we carefully investigate the key errors (if any) in the research we discuss, and I teach the doctoral students what key aspects they should focus on when designing and evaluating studies. One doctoral course that I have taught for 25 years has focused on studies of psychological and behavioral aspects of consumer decision-making and judgment and decision-making more generally. The emphasis in doctoral courses is often on consumer research, designing surveys, and evaluating published articles and studies.

8. Prior to joining Stanford University, during the six years that I was on the faculty of the University of California at Berkeley (1987-93), I taught an MBA Marketing Management course, a Ph.D. course on buyer behavior, and a Ph.D. course on buyer decision-making. I also taught in various executive-education programs, including a program for marketing managers in high-technology companies.

9. After completing my MBA studies and before starting my Ph.D. program, I worked for five years in a marketing capacity in a subsidiary of Motorola Inc., serving in the last two years as the product-marketing manager for various communications products. My work included (a) defining new products and designing marketing plans for new product introductions, (b) customer and competitor surveys and analysis, (c) pricing and advertising, and (d) sales forecasting.

10. I have conducted, supervised, or evaluated well over 2,000 marketing research studies dealing with various aspects of customers' and managers' behavior and decision making, covering topics such as decision-making processes, branding, pricing, advertising methods, product configurations, marketing strategies, and assessments of advertising/promotion effectiveness. Among these studies are surveys conducted by my MBA students of various marketing and advertising executives (as well as consumers) that examined different advertising channels and methods. Based on this experience, as well as my education, teaching, participation in consumer-research conferences, and numerous projects with companies and students, I have developed expertise in how to design consumer and managerial surveys, how to conduct consumer/managerial surveys, problems and pitfalls that are common in surveys, how to analyze the data from surveys, and what the results of surveys can—and cannot—show.

11. I serve on the editorial boards of various peer-reviewed journals, such as the Journal of Consumer Research, the Journal of Marketing Research, the Journal of the Academy of Marketing Science, and the Journal of Consumer Psychology. In addition, I am the Co-Editor of the Consumer Psychology Review journal. I also frequently review articles submitted to journals in other fields, such as psychology, organizational and individual decision-making, and economics. Almost all the articles I review include surveys that I carefully examine, often identifying issues that need to be addressed and suggesting to the authors how to conduct new studies. I received

(twice) the Outstanding Reviewer Award from the Journal of Consumer Research. As a reviewer, I am asked to evaluate the research of scholars wishing to publish their articles in leading scholarly journals. In addition, I have worked as a consultant for companies and organizations on a variety of marketing and buyer behavior topics, the design of consumer surveys, and the measurement of consumer preferences.

12. I have also served as an expert in well over 200 prior litigations involving various marketing, advertising, and buyer behavior issues (including consumer surveys), technology marketing, the impact of product features, class actions, trademark-related matters, false advertising, branding, survey methods, and other issues. My surveys and expert opinions have been relied upon by various courts.[3] A list of cases in which I testified as an expert during the past ten years is included with this report as Appendix B. I am being compensated at the rate of $900 an hour. In addition, I receive compensation based on the professional fees of Analysis Group, Inc., an economic consulting firm which has provided research support and assisted in the

[3] *See, e.g.*, *Malletier v. Dooney & Bourke, Inc.*, 525 F. Supp. 2d 558, 626 n.210 (S.D.N.Y. 2007) (noting that Dr. "Simonson is eminently qualified to analyze survey techniques"); *VIP Prods., LLC v. Jack Daniel's Props., Inc.,* 291 F. Supp. 3d 891, 902 (D. Ariz. 2018) ("Dr. Simonson has served as an expert witness on numerous occasions, providing testimony on issues related to marketing, consumer behavior, trademark-related matters, false advertising, and branding."); *Gucci Am., Inc. v. Guess?, Inc.*, 831 F. Supp. 2d 723, 745 (S.D.N.Y. 2011) (agreeing with Dr. Simonson's survey analysis); *THOIP v. Walt Disney Co.*, 690 F. Supp. 2d 218, 232-242 (S.D.N.Y. 2010) (relying on Dr. Simonson's opinions to exclude opposing expert's survey); *Simon Prop. Grp. L.P. v. mySimon, Inc.*, 104 F. Supp. 2d 1033, 1043-1044, 1048, 1050 (S.D. Ind. 2000) (repeatedly citing Dr. Simonson's expert report as support for excluding opposing expert's survey); *Sazerac Co. v. Fetzer Vineyards, Inc.*, 265 F. Supp. 3d 1013, 1016 (N.D. Cal. 2017) (relying on Dr. Simonson's survey: "Fetzer's expert's analysis using a modified Eveready survey was far superior to the two room survey employed by Sazerac's expert"); *Kargo Glob., Inc. v. Advance Magazine Publishers, Inc.*, No. 06 Cv. 550 (JFK) (S.D.N.Y. 2007), at 24-25, 41-42 (embracing Dr. Simonson's report as stating "unassailable commonsense" and denying motion to exclude his testimony); *Schechner. v. Whirlpool Corp.*, No. 2:16-cv-12409, Discovery Master's Report and Recommendation on Motions to Strike Expert Opinions (Dkt. 96, 101, 111, and 112), October 30, 2018, at p. 19 ("Simonson's credentials are impressive, and his qualifications related to consumer research cannot be reasonably challenged."); *Gutierrez v. Wells Fargo Bank, N.A.*, 730 F. Supp. 2d 1080, 1114 (N.D. Cal. 2010) ("This remarkably candid opinion was echoed throughout Expert Simonson's *direct* testimony"); *People of the State of California v. Macy's Inc.*, (Cal. Super. 2021), Case No. BC 643040, Statement of Decision, July 13, 2021, at p. 10 ("The Court finds that the survey performed by Dr. Simonson was exemplary and a model of how litigation surveys should be conducted. The Court, accordingly, affords the survey's results and conclusions based thereon a high degree of credibility and weight.").

preparation of this report under my direction and supervision. My compensation is not dependent in any way on the outcome of this litigation.

B. Assignment

13. I was asked by counsel for Google, LLC ("Google") to conduct surveys designed to examine how advertisers at companies and advertisers at ad agencies (collectively, "advertisers") approach, manage, and evaluate digital advertising and, in particular, display advertising and programmatic display advertising.[4] Specifically, I was asked to address the following issues:

a. identifying considerations that are relevant for advertisers' budgeting decisions, including how and where they allocate advertising spending;

b. examining advertisers' potential reactions to changing display advertising costs;

c. examining advertisers' use of ad buying tools for programmatic display advertising;

d. identifying methods that are implemented by advertisers to assess advertising performance;

[4] As described in more detail below, "display advertising" was defined to these survey participants as: "digital ads made up of text, image, video, and/or other multimedia components that typically appear along the top or sides of a website, or sometimes in the middle of other content on a website. Examples of display ad formats include banner ads, animations, and interactive content. Display ads do not include ads placed on social media platforms." As described below in paragraph 52, these definitions were created for purposes of these surveys only, in order to test—among other things—the degree to which advertisers viewed certain types of ads, including ads placed on social media platforms, as substitutes for other types of display ads. I did not conduct a survey to determine how advertisers use the terms "display" or "social." In the Higher-Spend Advertiser Survey and Agency Survey, "programmatic ads" were defined as: "ads that…are transacted and fulfilled using automation. In programmatic transactions, the price of each impression is typically determined in an auction conducted automatically before the impression is served." As discussed in more detail below, because lower-spend advertisers might not regularly differentiate between programmatic and direct deals transaction methods, I did not refer to programmatic ads and instead asked about display advertising more generally in the Lower-Spend Advertiser Survey.

e. examining use of advertising agencies by advertisers at companies; and

f. examining advertisers' sophistication and use of experiments.

14. The documents that I relied upon in connection with my work in this matter are listed in Appendix C.

15. My analysis may change before trial if additional information from any of the parties or their experts becomes available. I, therefore, reserve the right to supplement my report accordingly.

II. SUMMARY OF CONCLUSIONS

16. The three surveys described in this report examined how advertisers manage, monitor and make decisions concerning digital advertising, in general, and programmatic display advertising, in particular. The participants were involved in making decisions concerning digital advertising on behalf of their companies (or clients in the case of ad agencies). The final tabulated samples included 502 "higher-spend advertisers" (spending over $500,000 annually on advertising), 302 "lower-spend advertisers" (spending less than $500,000 annually on advertising, including 138 advertisers who spend less than $50,000 annually on advertising), and 381 respondents from advertising agencies, all of whom were based in the U.S.

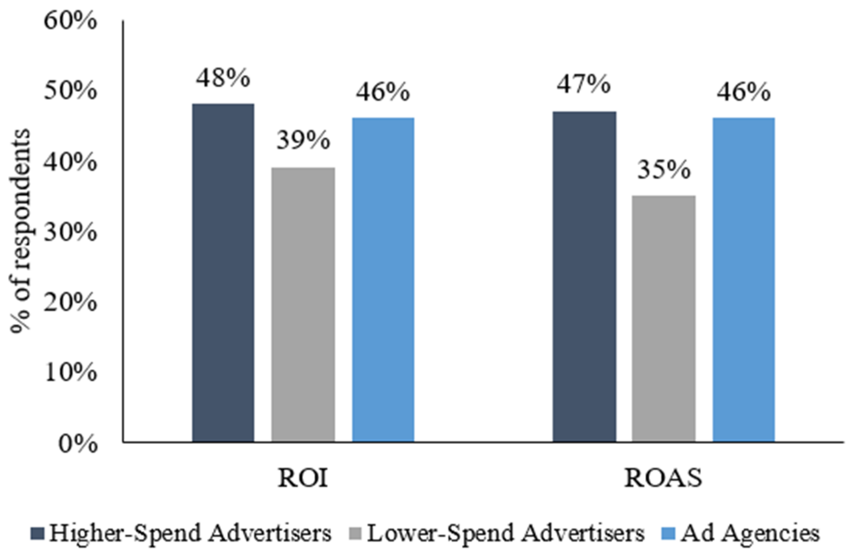
17. The surveys were designed to determine advertisers' actual choices and considerations, as well as their evaluations of alternative advertising buying tools and the manner in which they assess the cost effectiveness of these tools. In addition, participants were given a scenario and asked to indicate how they would respond in case the cost of programmatic display advertising increases by "a small but significant amount."[5]

[5] This phrase was designed to leave it to the respondents to consider their reaction, if any, if (what they consider to be) "a small but significant" increase in the cost of programmatic display advertising occurred. *See* paragraph 65.

18. Although there were minor differences among the three surveys (*i.e.*, the "Higher-Spend Advertiser Survey," "Lower-Spend Advertiser Survey," and "Ad Agency Survey"), the overall results were generally similar across them. The surveys' results lead to the following general conclusions:

- Advertisers and ad agency employees rely on a variety of methods to monitor the performance of their digital advertising, including measures of Return on Investment (ROI) and/or Return on Ad Spend (ROAS). ROI and ROAS were most commonly identified by respondents as the most important metric for accurately assessing performance. Based on these and other measures, advertisers and ad agency employees assess the effectiveness of the various advertising types and ad buying tools they use.

Figure 1. Share of Respondents in Each Survey Using ROI and ROAS to Measure Performance for Display Ads

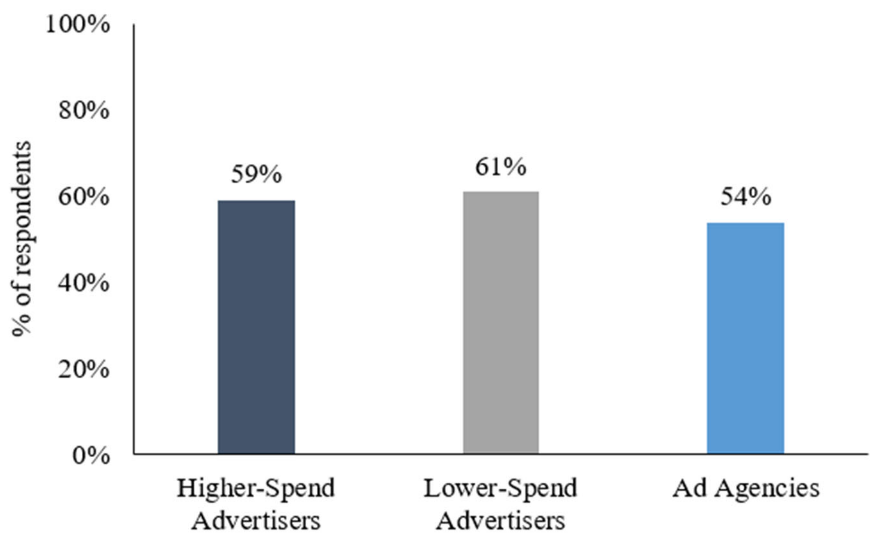


Notes & Sources: From Exhibits 32, 63, and 98.

- Advertisers and ad agency employees can and do adjust their advertising spending allocation based on information on costs and returns of various advertising types. In response to a scenario involving a "small but significant"

increase in the cost of programmatic display advertising (or display advertising more broadly, in the case of lower-spend advertisers[6]), approximately 54 to 61 percent of advertisers and ad agency employees indicated that they would divert spending to other types of digital advertising (described below). These results were generally consistent for higher-spend advertisers, lower-spend advertisers, and ad agency employees, suggesting that advertisers of all types would react to changes in the cost of programmatic display advertising by reallocating spending to other advertising types.

Figure 2. Share of Respondents in Each Survey Who Would Divert Spending to Other Digital Advertising Types in Response to an Increase in the Cost of Display Advertising



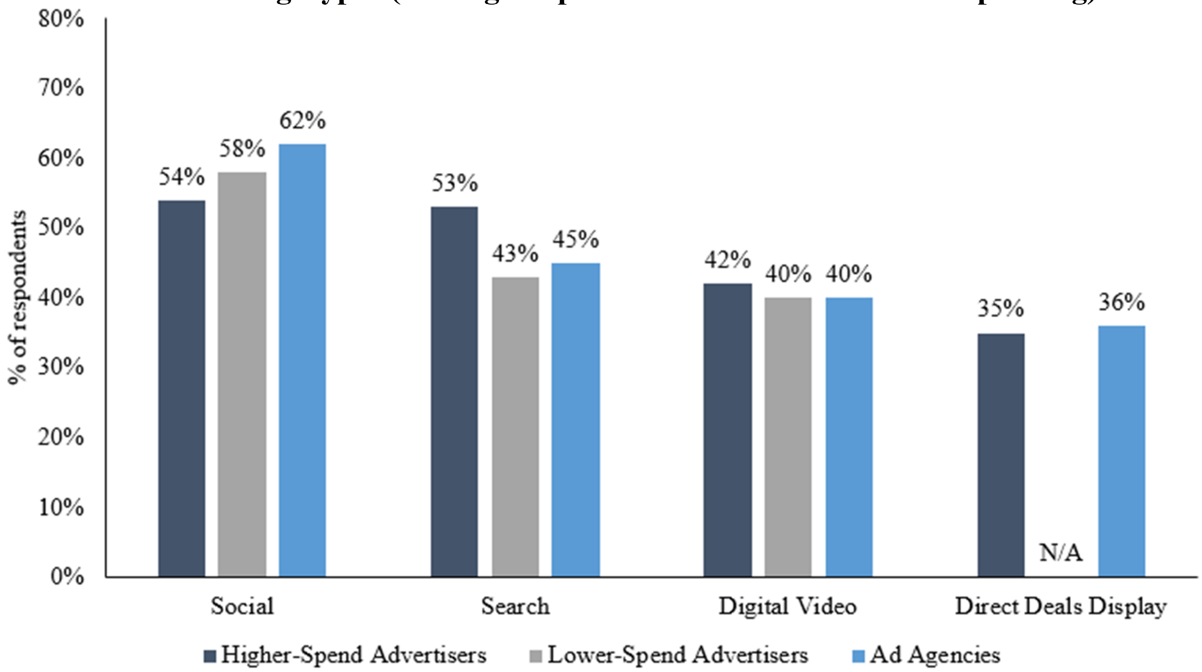
Notes & Sources: From Exhibits 15, 58, and 81.

- Among the most common types of advertising to which advertisers and ad agency employees would divert spending were social, search, and digital video,

[6] As discussed in more detail below, because lower-spend advertisers might not regularly differentiate between programmatic and direct deals transaction methods, I did not refer to programmatic ads and instead asked about display advertising more generally in the Lower-Spend Advertiser Survey.

indicating that these advertising types serve as substitutes for programmatic display advertising for many advertisers and ad agencies.

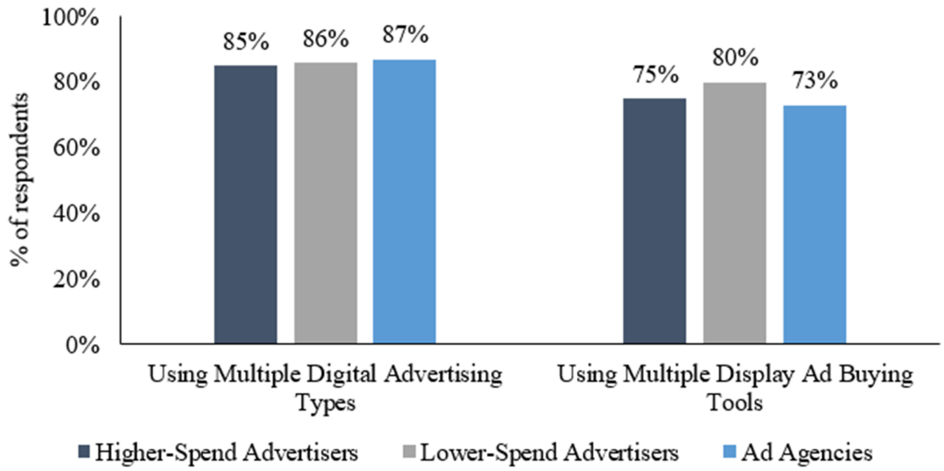
Figure 3. Share of Respondents in Each Survey Diverting Spending to Other Digital Advertising Types (Among Respondents Who Would Divert Spending)



Notes & Sources: From Exhibits 16, 59, and 82. As discussed in more detail below, respondents in the Lower-Spend Advertiser Survey were not asked about "Direct Deals Display."

- The survey results demonstrate that most advertisers and ad agencies tend to multi-home across different types of digital advertising and, within display advertising, through the use of multiple ad buying tools and platforms. Across higher-spend advertisers, lower-spend advertisers, and ad agency employees, over 85 percent of respondents indicated using more than one type of digital advertising in addition to display advertising, and approximately 75 percent of respondents indicated using more than one ad buying tool for display advertising.

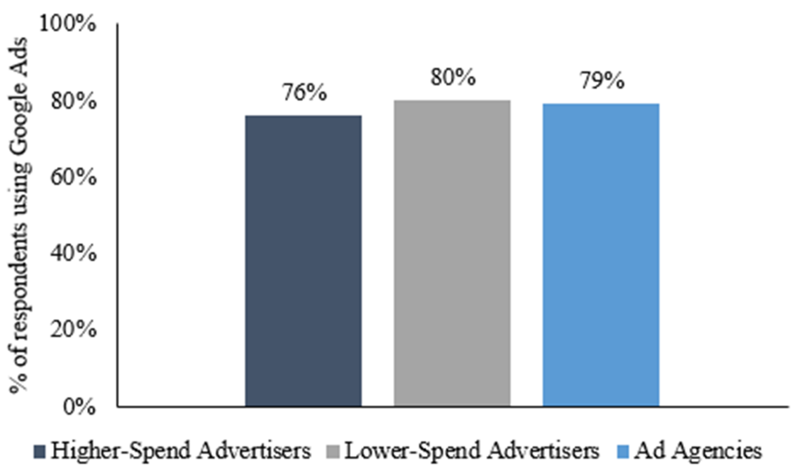
Figure 4. Share of Respondents in Each Survey Multi-homing Across Different Types of Digital Advertising and Display Ad Buying Tools



Notes & Sources: From Exhibits 9, 21, 45, 49, 76, and 87.

- The survey results also showed that most users of Google ad buying tools also multi-home across display ad buying tools. In particular, over 75 percent of Google Ads users also indicated using at least one other non-Google ad buying tool for display advertising.

Figure 5. Share of Google Ads Users in Each Survey Using At Least One Other Non-Google Ad Buying Tool for Display Advertising



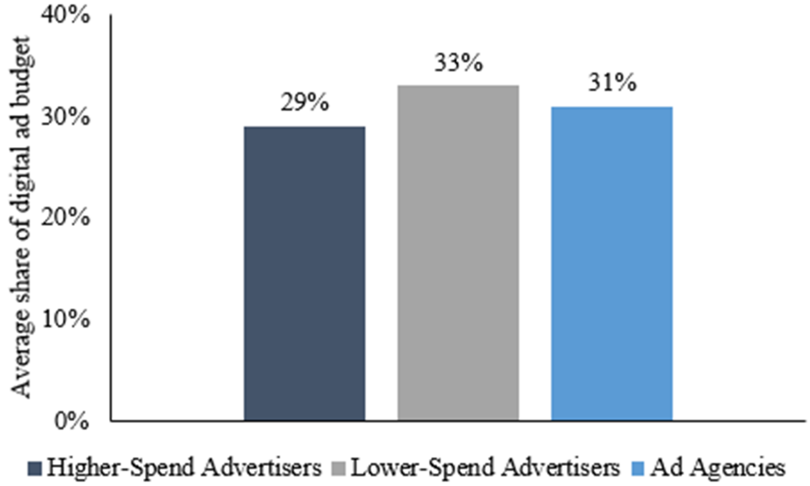
Notes & Sources: From Exhibits 23, 51, and 89.

- Thus, the survey findings indicate that most advertisers and ad agencies use a variety of other digital advertising types and employ multiple ad buying tools

for display advertising, so they typically have a variety of alternatives to Google ad buying tools. That is, advertisers, by and large, already practice multi-homing, which facilitates flexible allocations and tool selection as desired.

- Furthermore, the survey findings show that advertisers and ad agency employees often add new ad buying tools. In particular, approximately 30 to 40 percent of higher-spend advertisers and ad agency employees indicated that they started using at least one ad buying tool for programmatic display in the past year.
- While my assignment focused in large part on programmatic display advertising (as defined for purposes of the surveys), it is important to consider the broader context of advertising spending. The survey findings make clear that programmatic display advertising (or display advertising more generally, for lower-spend advertisers) accounts for a relatively small portion of most advertisers' digital advertising spending. Across higher-spend and lower-spend advertisers and ad agency employees, other types of digital advertising (including search, social, digital video, etc.) accounted for approximately 70 percent of digital advertising spending, on average.

Figure 6. Average Share of Digital Ad Budget Spent on Display Advertising[7]

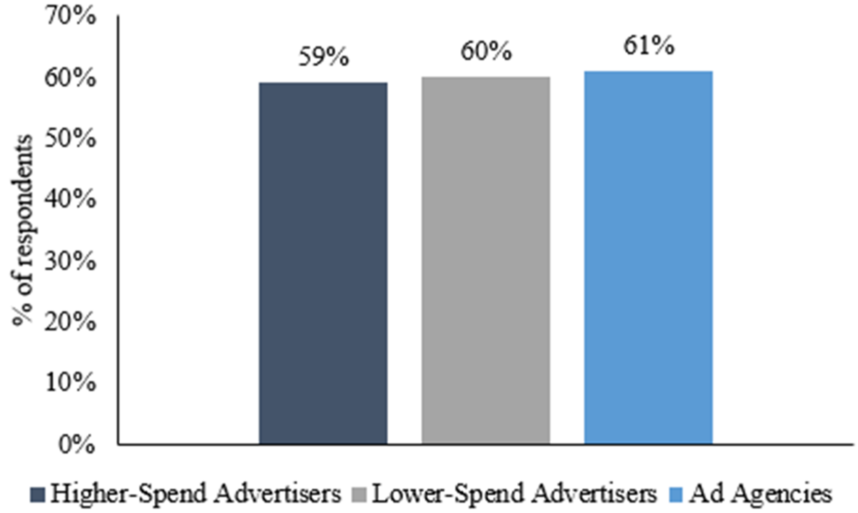


Notes & Sources: From Exhibits 14, 57, and 80.

- In addition to monitoring performance measures, many advertisers and ad agency employees also conduct experiments on display ads, which suggests an additional level of sophistication in optimizing their spending. The surveys indicate that most advertisers use the services of ad agencies or advertising consultants, which further assist them in monitoring and making necessary adjustments to their advertising activities and budget allocations across advertising types and ad buying tools.

[7] As described in more detail elsewhere in this report, the Lower-Spend Advertiser Survey referred to "display advertising," whereas the Higher-Spend Advertiser Survey and the Agency Survey referred to "programmatic display advertising." *See* paragraph 52 for further explanation of the definitions used for purposes of this report.

Figure 7. Share of Respondents in Each Survey Conducting Experiments on Display Ads



Notes & Sources: From Exhibits 35, 66, and 101.

III. INTRODUCTION

A. Overview of Survey Design

19. As described above, I was asked to examine how advertisers at companies and employees at ad agencies approach, manage, and evaluate digital advertising. As I have taught my students, advertising practices and the factors guiding advertising and other managerial decisions as well as the manner in which advertising performance is evaluated vary greatly across advertisers, depending on the type of business, the circumstances, the available advertising tools, individual preferences, and other factors. While anecdotal examples of choices by specific advertisers only provide narrow insight into the decision-making practices of a few selected advertisers, surveys can rigorously examine advertising practices across a broad range of advertisers and allow for more generalizable conclusions.

20. Thus, the surveys described in this report are designed to provide a broad review of advertisers' *actual* decisions and considerations, as well as their expected responses to changes in the cost or performance of a particular type of advertising. As described above, the primary focus

of my assignment was on display ads and programmatic display ads in particular.[8] However, because display advertising cannot be properly examined without considering the range of advertising types available to and used by advertisers, the surveys also asked respondents about the range of advertising types they use and the impact, if any, of a change in one component (*e.g.*, the cost of programmatic display advertising increases by a small but significant amount) on decisions pertaining to other advertising types.

21. When determining the proper respondent universe for a study designed to provide a broad picture of advertising decisions, it is important to include the main categories of decision makers. In the present case, there are two potentially significant distinctions: the size of the advertising budget and the difference between an advertiser and an advertising agency. First, the size or advertising budget of a company or an organization might make a difference in terms of the advertising tools they employ, the tradeoffs they make, their considerations, the performance metrics they rely on, and other dimensions. Thus, it was important for my study to include respondents with a wide range of different advertising spending levels, while making sure that there were enough respondents representing lower-spend advertisers. In addition, many advertisers use the services of ad agencies (as confirmed in the survey). It is possible that agency employees who handle and assist advertisers in evaluating and implementing their advertising have a different perspective and information than the advertisers themselves. To the extent that such differences exist, I decided that it was important for my study to also examine respondents from advertising agencies.

[8] As described below in paragraph 52, the definition of "display advertising" used in the surveys was created for purposes of these surveys only, in order to test—among other things—the degree to which advertisers viewed certain types of ads, including ads on social media platforms, as substitutes for other types of display ads. I did not conduct a survey to determine how advertisers use the terms "display" or "social."

22. Prior to designing the survey questionnaires, I arranged for 14 preliminary interviews to be conducted with advertisers with a range of different spending levels as well as with ad agencies to explore some of the topics the survey would ultimately examine.[9] The interviewer was an employee of Analysis Group who was on the team which assisted me with the surveys. I listened to all of these interviews.

23. To obtain live reactions from interviewees while answering the questions, respondents were given the following instructions:

> When answering, please give as much detail as possible. However, if you do not know the answer, that is okay -- just let me know.

24. This technique is known in the scientific literature as "think-aloud protocols," which has advantages and some limitations in terms of capturing respondents' understanding and interpretation of the questions in real time.[10] I used the feedback and responses of the interview participants to inform the development of the survey questions.

25. In designing the survey questions, it was important to recognize potential differences between different groups of advertisers that might affect their understanding of certain industry-specific terminology or otherwise affect the question phrasing. Ultimately, I designed three survey questionnaires tailored to different groups of respondents: "higher-spend advertisers" spending more than $500,000 on advertising in the past year (the "Higher-Spend Advertiser Survey"), "lower-spend advertisers" spending less than $500,000 on advertising in the past year (the "Lower-Spend Advertiser Survey"), and individuals at ad agencies (the "Ad Agency

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[9] The initial interview participants were members of the same Advertiser Perceptions panel (described below) that was used for the online surveys. To avoid overlap, I requested that respondents who participated in the preliminary interviews not be invited to participate in the subsequent surveys. *See* Appendix D for the discussion guide used during the preliminary interviews.

[10] For a review, *see, e.g.,* Robert Crutcher (1994), "Telling What We Know: The Use of Verbal Report Methodologies in Psychological Research," *Psychological Science*, Vol. 5, No. 5, pp. 241-248; *see also* Itamar Simonson (1989), "Choice Based on Reasons: The Case of Attraction and Compromise Effects," *Journal of Consumer Research*, Vol. 16, pp. 158-174.

Survey").[11] While the three surveys asked similar questions covering the same general set of topics, I made certain adjustments to the question language and terminology to make the questionnaires more suitable for respondents in each of these different groups. For example, the preliminary interviews suggested that advertisers with lower spending levels might be less familiar with certain terminology, such as "programmatic" buying methods or "ad buying tools," than advertisers with higher spending levels. Thus, I simplified certain language in the Lower-Spend Advertiser Survey questionnaire to make the questions more understandable to advertisers spending less than $500,000 on advertising in the past year, while still including these terms in the Higher-Spend Advertiser Survey questionnaire to maintain additional precision for advertisers who were more familiar with such terminology.[12,13] In addition, because respondents who work at advertising agencies may work on behalf of multiple clients at the same time, I adjusted the phrasing of several questions in the Ad Agency Survey to ask about the client on which they spend the most time, so that the point of reference was consistent across the sample and did not require respondents to try to average across different advertising clients.[14]

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11 The complete questionnaires for the three surveys are presented in Appendices F.1, G.1, and H.1, and are discussed in more detail in the subsequent sections of my report.

12 The choice of the specific threshold to divide respondents between the Lower-Spend Advertiser Survey and the Higher-Spend Advertiser Survey was based on my judgment that advertisers spending $500,000 or more were not at risk of misunderstanding the terminology used in the Higher-Spend Advertiser Survey. The survey pre-tests I conducted, which are described in more detail below, were consistent with the conclusion that respondents spending less than $500,000 on advertising understood the terminology used in the Lower-Spend Advertiser Survey and respondents spending more than $500,000 on advertising understood the terminology used in the Higher-Spend Advertiser Survey. While some studies of demand-side platform usage conducted by Advertiser Perceptions require respondents to have a minimum of $1 million in annual digital ad spend, I included respondents that had spending of less than $1 million in my surveys in light of Plaintiffs' allegations about advertisers with lower spending levels. *See*, *e.g.*, GOOG-AT-MDL-008928829-914, at 831.

13 The questionnaire adjustments are discussed in more detail in Section V. In each survey, I also asked respondents more specifically about their level of advertising spending. While the sample size for any very narrow spending level may be small, these data allow me to examine, for example, the practices and considerations of organizations that spend less than $50,000 or more than $50 million annually.

14 The questionnaire adjustments are discussed in more detail in Section VI. As discussed below, I did not impose a required level of advertising spend for the Ad Agency Survey (or tailor the survey questions differently based on the level of advertising spend of the respondent's primary client) because respondents at ad agencies handle various advertising tasks across multiple clients, which provides them the requisite level of sophistication to

26. The surveys, which were largely descriptive,[15] followed the standards of proper surveys.[16] The questions were phrased in a nonleading manner.[17] The order of response options in closed-ended questions was rotated or randomized to avoid potential "order effects,"[18] and measures were taken to identify any spurious answers (as explained below).[19]

27. Until the conclusion of the surveys, respondents were "blind" to the purpose of the survey and the identity of its sponsor. Although these surveys were conducted on behalf of Google, it was important to not single out or make Google prominent in the survey questions, because such prominence could have affected the answers and thereby potentially provide inaccurate data due

understand the advertising terminology used in the survey. Similar to the Lower-Spend Advertiser Survey and the Higher-Spend Advertiser Survey, I did ask respondents in the Ad Agency Survey to indicate the level of advertising spending of their primary client, which enables me to examine the practices of ad agencies for clients with different spending levels.

15 The surveys were "descriptive," in that they were primarily designed to learn from advertisers what they actually do and, in some cases, why they do it (from their perspective). Other descriptive surveys of advertising managers have been published in peer-reviewed journals. *See*, *e.g.*, Douglas West and Gerard P. Prendergast (2009), "Advertising and Promotions Budgeting and The Role of Risk," *European Journal of Marketing*, Vol. 43, No. 11/12, pp. 1457-1476.

16 For references regarding general survey guidelines, *see, e.g.,* Shari S. Diamond (2011), "Reference Guide on Survey Research," in *Reference Manual on Scientific Evidence*, Third Edition, Federal Judicial Center ("Diamond (2011)"), pp. 359-423; Don A. Dillman, Jolene D. Smyth, and Leah Melani Christian (2014), *Internet, Phone, Mail, and Mixed-Mode Surveys: The Tailored Design Method*, Fourth Edition, Wiley; Norman M. Bradburn, Seymour Sudman, and Brian Wansink (2004), *Asking Questions: The Definitive Guide to Questionnaire Design – For Market Research, Political Polls, and Social and Health Questionnaires*, Revised Edition, Jossey-Bass ("Bradburn et al (2004)"); Erin Ruel, William Edward Wagner III, and Brian Joseph Gillespie (2016), *The Practice of Survey Research: Theory and Applications*, SAGE Publications, Inc.

17 As discussed below, the pre-tests conducted for the three surveys confirmed that the questions were clear and nonleading.

18 *See, e.g.*, Diamond (2011), at pp. 395-396 ("The order in which questions are asked on a survey and the order in which response alternatives are provided in a closed-ended question can influence the answers … To control for order effects, [] the order of the response choices in a survey should be rotated[.]").

19 This approach could help determine the level of noise caused by "spurious response error," which occurs when survey respondents claim to recognize or consume brands that do not exist. *See, e.g.,* Ronald E. Goldsmith (1988), "Spurious Response Error in a New Product Survey," *Journal of Business Research*, Vol. 17, No. 3, pp. 271-281 ("Goldsmith (1988)").

to what is known as "focalism"[20] and possible "demand effects."[21] Thus, respondents were informed only at the conclusion of the survey about its sponsor and were given the option to indicate that their responses should not be included in any statistical or other analysis of the findings, which was implemented accordingly (*i.e.*, I have not received any information about their responses and those responses are not included in the results described in this report or any other analysis).[22]

28. After developing the survey questionnaires, I subsequently arranged to conduct a dozen additional interviews, or "pre-tests," of the questionnaires.[23, 24] Instead of think-aloud protocols, participants in these subsequent pre-test interviews completed the survey on their own, but they were asked a few additional questions at the conclusion of the survey. The questions were the following:

- Did you have any problems or difficulties taking the survey?
- Did you think any questions were unclear? If so, which ones and why?
- Did you think any answer options were unclear? If so, which ones and why?

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20 *See, e.g.*, Timothy D. Wilson and Daniel T. Gilbert (2003), "Affective Forecasting," *Advances in Experimental Social Psychology*, Vol. 35, pp. 345-411, at pp. 366-369. *See also* Daniel Kahneman, et al. (2006), "Would You Be Happier If You Were Richer? A Focusing Illusion," *Science*, Vol. 312, pp. 1908-1910, at p. 1908; David Gal and Itamar Simonson (2020), "Predicting Consumers' Choices in the Age of the Internet, AI, and Almost Perfect Tracking: Some Things Change, the Key Challenges Do Not," *Consumer Psychology Review*, Vol. 4, No. 1, pp. 1-18.

21 *See, e.g.*, Itamar Simonson and Ran Kivetz (2012), "Demand Effects in Likelihood of Confusion Surveys: The Importance of Marketplace Conditions," in *Trademark and Deceptive Advertising Surveys: Law, Science, and Design*, Chapter 11, Shari S. Diamond and Jerre B. Swann, Eds., American Bar Association, pp. 243-259, at p. 243. *See also* Alan G. Sawyer (1975), "Demand Artifacts in Laboratory Experiments in Consumer Research," *Journal of Consumer Research*, Vol. 1, No. 4, pp. 20-30, at pp. 20-21.

22 As described later, the surveys did not include a "Back" button and disabled the "Back" option in respondents' browsers. *See* Appendix F.1, at F.1-2. Therefore, respondents were not able to change their previous answers after being informed about the survey sponsor.

23 Specifically, five pre-tests of the Higher-Spend Advertiser Survey questionnaire, three pre-tests of the Lower-Spend Advertiser Survey questionnaire, and four pre-tests of the Ad Agency Survey questionnaire were conducted. Pre-tests can help determine whether survey questions were clear and unambiguous.

24 *See, e.g.,* Bradburn et al (2004), at p. 317 ("[A] pretest will help you determine if the questionnaire is gathering the data you need and whether it is convenient and clear for respondents to fill out. Additionally, a pretest will often suggest problems you were unaware of, and it can help you avoid costly mistakes.").

- Did any questions in the survey make you feel that you should answer one way or the other? If so, which ones and why?
- What do you think might be the purpose for conducting this survey? What makes you think so?
- Is there anything else you would like to say about the survey?[25]

29. Overall, the results of these pre-test interviews indicated that, consistent with my prior experience with similar survey questions, the questions in this survey were clear, and respondents encountered no difficulties understanding the questions.[26]

B. Sample Selection and Survey Administration

30. All surveys were administered via the Internet in September and October 2023. The samples of advertisers and of ad agency employees were obtained through Advertiser Perceptions ("AP"). A "leading provider of research-based strategic market intelligence and analysis to the media, advertising and ad tech industry,"[27] AP has specialized in understanding the advertising market and advertising decision makers.[28] This allowed them to reach a large pool of confirmed advertisers at companies and employees at ad agencies. AP regularly surveys advertisers at companies and employees at ad agencies to generate reports for use by companies

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[25] *See* Appendix E.

[26] Given these results, I did not make any changes to the survey questionnaires based on the results of the pre-tests.

[27] Business Wire, "Eureka Equity Partners Announces Investment in Advertiser Perceptions," https://www.businesswire.com/news/home/20230216005622/en/Eureka-Equity-Partners-Announces-Investment-in-Advertiser-Perceptions (viewed 9/24/2023).

[28] For example, Advertiser Perceptions publishes a series of "DSP Reports" summarizing insights from a survey of advertising decision makers. *See*, *e.g.*, GOOG-DOJ-11021167-216; GOOG-DOJ-AT-00748293-396; GOOG-DOJ-AT-00839664-764; GOOG-DOJ-AT-02524665-749; GOOG-AT-MDL-001272416-493.

in the advertising space.[29] AP also frequently runs surveys at the request of specific companies seeking to understand advertisers' decisions, considerations, and expected responses to changes.[30]

31. AP maintains a proprietary "AdPROs" panel and works with a variety of third-party survey panels to recruit qualified respondents.[31] The AdPROs panel includes U.S.-based respondents who are brand marketers, agency executives, media specialists, digital publishers, and IT leaders directly involved in media and ad tech purchase decisions.[32] Notably, the ADPROs panel includes "[q]uantitative and qualitative respondents covering the world's top brands and agencies – including 100% of the Ad Age Top 200 Advertisers and controlling $165B+ of annual ad spend."[33]

32. For each of the surveys described in this report, members of AP's AdPROs panel and third-party partner panels were invited to participate in the survey via email. Up to two reminder emails were sent to participants who did not complete the survey within three to four days of the initial invite.

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[29] *See, e.g.*, GOOG-DOJ-11021167-216; GOOG-DOJ-AT-00748293-396; GOOG-DOJ-AT-00839664-764; GOOG-DOJ-AT-02524665-749. *See also* Advertiser Perceptions, "Data-Driven Market Intelligence: For More Effective New Business and Client Retention Pitches," https://advertiserintelligence.com (viewed 10/2/2023); Advertiser Perceptions, "What Advertisers Think," 2016, available at https://www.advertiserperceptions.com/wp-content/uploads/2016/08/2016-AP-Company-Brochure.pdf, at pp. 6, 17-18.

[30] Advertiser Perceptions, "Key Business Intelligence That Drives Results: Take Actions Based on Data-Driven Strategic Sales & Marketing Recommendations," https://www.advertiserperceptions.com/results/ (viewed 10/2/2023); Advertiser Perceptions, "What Advertisers Think," 2016, available at https://www.advertiserperceptions.com/wp-content/uploads/2016/08/2016-AP-Company-Brochure.pdf, at pp. 2, 6, 17-18.

[31] Advertiser Perceptions, "2023 Ad Pros Page - Advertiser Perceptions," https://www.advertiserperceptions.com/join-ap-ad-pros/ (viewed 9/24/2023).

[32] Advertiser Perceptions, "2023 Ad Pros Page - Advertiser Perceptions," https://www.advertiserperceptions.com/join-ap-ad-pros/ (viewed 9/24/2023); Advertiser Perceptions, "What Advertisers Think," 2016, available at https://www.advertiserperceptions.com/wp-content/uploads/2016/08/2016-AP-Company-Brochure.pdf, at p. 7.

[33] Advertiser Perceptions, "2023 Ad Pros Page - Advertiser Perceptions," https://www.advertiserperceptions.com/join-ap-ad-pros/ (viewed 9/24/2023).

33. AP has a standard process they put in place to generate survey samples that are representative of the advertiser population they are intended to reflect.[34] Specifically, AP maintains estimates of the distribution of U.S. based advertisers across a variety of metrics, including company size, annual media spend, industry/sector, advertiser title, and demographic information such as age, gender, and region. At my direction, and in accordance with their standard practices, AP sent invitations to panel members to generate an inbound sample[35] that was representative of the U.S. advertiser population accounting for the vast majority of spending.[36]

34. At the direction of counsel, I asked AP to pre-screen respondents to ensure that they did not work for any companies that are parties to, were identified on initial disclosures in, or have received subpoenas in connection with *United States v. Google LLC*, No. 1:23-cv-00108 (E.D. Va.), the cases consolidated in *In re Google Digital Advertising Antitrust Litigation*, No. 1:21-md-03010 (S.D.N.Y.), and/or *Texas v. Google LLC*, No. 4:20-cv-00957 (E.D. Tex.).[37] Respondents who work for companies on this list did not participate in any of the surveys. To the extent those companies are, on average, more sophisticated advertisers, then my results would likely be conservative on key topics such as multi-homing (*i.e.*, the use of multiple ad buying tools and/or

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[34] *See, e.g.*, GOOG-DOJ-AT-02524665-749, at 666-667; GOOG-DOJ-AT-00839664-764, at 666-667, 726; GOOG-DOJ-11021167-216, at 168; GOOG-AT-MDL-002038336-380, at 337-338. According to AP, their "proprietary database and panels of media decision makers are large and responsive" and the "advertiser survey and questionnaire development process that [they] employ is proven and ensures optimal response." Advertiser Perceptions, "What Advertisers Think," 2016, available at https://www.advertiserperceptions.com/wp-content/uploads/2016/08/2016-AP-Company-Brochure.pdf, at p. 18.

[35] The "inbound sample" refers to the sample of respondents who clicked into the survey link provided in the invitation. AP's approach of generating a representative inbound sample is similar to the methodology applied by many other panel providers I have worked with in the past.

[36] For the Higher-Spend Advertiser Survey, in order to generate sufficiently large sample sizes across different spending levels, AP generated a sample with equal proportion of respondents within the $500,000 to $15,000,000 annual ad spend range and the $15,000,000+ annual ad spend range. However, AP applied their standard practice to generate a representative inbound sample within those sub-groups.

[37] The relevant companies are identified in Appendix I.

advertising types) and substitution across advertising types in response to cost increases, which likely requires greater experience and expertise.[38]

35. While conducting the analyses described throughout this report, I also examined whether key results differed by demographics or advertiser spend (*e.g.*, whether male respondents are more or less likely to multi-home than female respondents) and found that, by and large, the results are generally consistent across different subgroups.[39] In addition to the standard process AP put in place to generate survey samples that are representative, this consistency supports that the survey results are not meaningfully impacted by the specific composition of the sample (*e.g.*, the number of male respondents versus female respondents).

36. As part of the quality control process, AP uses Research Defender, a digital fingerprinting and fraud detection platform,[40] to exclude bots and manage duplication across sample partners, in addition to other internal metrics such as speeders (*i.e.*, respondents who completed the survey in a very short amount of time), straight liners (*i.e.*, respondents who gave the same answer for a series of questions), inconsistencies in responses, and low-quality open-ended responses. Respondents who completed the survey were compensated in points redeemable for cash, equivalent to approximately $10 to $20.[41]

37. For each survey, the final dataset provided by AP included all respondents who entered the survey, passed AP's quality control process, and did not choose to exclude their

[38] For a general overview of the literature on the effect of knowledge and expertise, *see*, *e.g.*, Joseph W. Alba and J. Wesley Hutchinson (1987), "Dimensions of Consumer Expertise," *Journal of Consumer Research*, Vol. 13, No. 4, pp. 411- 454.

[39] *See* Exhibits 103-104.

[40] Research Defender, "Home," https://researchdefender.com (viewed 10/19/2023).

[41] Research shows that providing respondents with financial incentives for completing surveys increases response rates and reduces nonresponse bias. *See, e.g.*, Diamond (2011), at p. 383; Eleanor Singer and Cong Ye (2013), "The Use and Effects of Incentives in Surveys," *The Annals of the American Academy of Political and Social Science,* Vol. 645, pp. 112-141, at p. 134; Colin F. Camerer and Robin M. Hogarth (1999), "The Effects of Financial Incentives in Experiments: A Review and Capital-Labor-Production Framework," *Journal of Risk and Uncertainty*, Vol. 19, No. 1-3, pp. 7-42.

responses.[42] In total, the final analytical samples included 502 advertisers with self-reported annual ad spend of at least $500,000 in the past year (the Higher-Spend Advertiser Survey), 302 advertisers with self-reported annual ad spend less than $500,000 (the Lower-Spend Advertiser Survey), and 381 ad agency employees (the Ad Agency Survey).[43]

38. In the sections below, I describe each of these surveys and their results in more detail.

IV. HIGHER-SPEND ADVERTISER SURVEY

A. Overview

39. I designed a survey questionnaire for higher-spend advertisers spending more than $500,000 annually to address a number of issues, including the following:

- use of digital advertising types;
- reliance on ad agencies;

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42 *See* discussion in paragraph 81 regarding respondents who opted to exclude their responses from the sample.

43 Exhibit 1; Exhibit 37; Exhibit 68. These sample sizes are large compared to many other surveys I have conducted throughout my career and allow me to draw reliable conclusions with sufficient precision for my purposes. As described throughout my report, many of the main results from the surveys in this matter are proportions (*e.g.*, the share of respondents who would divert spending away from programmatic display advertising in response to a cost increase or the share of respondents who use multiple ad buying tools for programmatic display advertising). These sample sizes allow for reasonably precise estimates of these proportions. For example, with a sample size of 300, the standard error around an estimated proportion of 50 percent is 0.0289 (calculated as $\sqrt{\frac{p \times (1-p)}{n}}$, where $p = 0.5$ and $n = 300$), which implies a 95 percent confidence interval of ± 5.67 percent (calculated as 1.96 × 0.0289 = 0.0566). Because, for a given sample size, the standard error is largest when the value of the estimated proportion is 50 percent, the 95 percent confidence interval is smaller than ± 5.67 percent for any other estimated proportion value (*e.g.*, 20 percent or 80 percent, etc.) with the same sample size of 300. The estimates become more precise with larger sample sizes. For example, with a sample size of 500, the standard error around an estimated proportion of 50 percent is 0.0224 (calculated as $\sqrt{\frac{p \times (1-p)}{n}}$, where $p = 0.5$ and $n = 500$), which implies a 95 percent confidence internal of ± 4.38 percent (calculated as 1.96 × 0.0224 = 0.0438). Holding sample size constant, the standard error of the difference between two estimated proportions is maximized when both estimated proportions are 50 percent. For example, for two samples of 300 observations each, the largest standard error of a difference in proportions is 0.0408 (calculated as $\sqrt{\frac{p_1 \times (1-p_1)}{n_1} + \frac{p_2 \times (1-p_2)}{n_2}}$, where $p_1 = 0.5$, $p_2 = 0.5$, $n_1 = 300$, and $n_2 = 300$), which implies a 95 percent confidence interval of ± 8.0 percent (calculated as 1.96 × 0.0408 = 0.0800).

- reactions (if any) to an increase in the cost of programmatic display spending, including whether and to what extent spending would be diverted to other digital advertising types;
- use of different ad buying tools for programmatic display advertising;
- metrics used to assess performance of programmatic display advertising; and
- use of experiments to inform different aspects of programmatic display advertising.

40. As noted above, the survey was designed to provide a broad review of advertisers' past decisions and behavior as well as their expected responses to changes. Thus, the survey involved a mix of questions about advertisers' considerations, past decisions, as well as questions presenting hypothetical scenarios.

B. Methodology

41. Five pre-test interviews for the Higher-Spend Advertiser Survey were conducted on September 1, 2023. No changes to the survey questionnaire were made based on these pre-test interviews. After pre-testing, the Higher-Spend Advertiser Survey was administered from September 5, 2023, to September 21, 2023. The full survey questionnaire is included in Appendix F.1. Screenshots of the survey as it appeared to respondents are presented in Appendix F.2.

1. Survey Universe and Screening Criteria

42. The survey universe for the Higher-Spend Advertiser Survey included advertisers and marketers based in the U.S. who work for companies that sell and advertise products or services (as opposed to ad agencies) and have spent over $500,000 on advertising in the past year.[44]

[44] As discussed above, because advertisers with lower spending levels may be less familiar with certain industry terminology used in the Higher-Spend Advertiser Survey, I required respondents to the Higher-Spend Advertiser

Because a primary focus of the survey was to assess decision-making regarding programmatic display advertising specifically, the survey universe was also limited to advertisers and marketers who have used programmatic display advertising in the past year and who were personally involved in decisions regarding their company's use of display advertising, including determining strategies, budgets, use of buying tools, and/or management of digital display campaigns.

43. Upon entering the survey, respondents were asked several standard introductory and demographic questions, followed by a series of screening questions to ensure that only respondents with the relevant characteristics that define the survey universe would qualify for the main questionnaire.[45]

44. First, prospective respondents who clicked on the link to the survey were asked to enter a "captcha" code presented on the screen to make sure the respondent was a person rather than a machine.

45. They were then told:

> **QS2.** Thank you for participating in our study. Your opinions are very important to us. If you don't know an answer to a question or if you don't have an opinion, please don't guess. Simply indicate this in your response by selecting the "Don't know / Unsure" option. There are no right or wrong answers.
>
> Your responses will be kept anonymous and will be analyzed as part of a larger sample of responses. The results of this study will not be used to try to sell you anything.
>
> If you wear glasses or corrective lenses when using a desktop computer, laptop computer, or tablet, please wear them throughout the survey.

Survey to spend more than $500,000 on advertising in the past year. Advertisers spending less than this amount were eligible for the Lower-Spend Advertiser Survey, which was similar to the Higher-Spend Advertiser Survey but simplified certain language.

[45] As shown in Appendix F.1, questions asked in the screening section of the questionnaire are identified by a "QS" prefix, questions asked in the main questionnaire are identified by a "Q" prefix, and the question asked in the follow-up section is identified by a "QF" prefix.

Please do not use the "Back" button of your browser while taking the survey. When you are ready to get started, please select the "Continue" button.

46. They were then asked about their age, gender, and state they live in to understand the demographic characteristics of the samples and to ensure respondents were over 18 and resided in the U.S. Respondents were screened out of the survey if they were younger than 18 years old, selected "Prefer not to answer" to the age question, or selected either "Don't know / Unsure" or "Other" to the state of residence question. I also asked respondents an attention check question in order to screen out inattentive respondents.

47. Next, respondents were asked a series of screening questions to determine whether they met the definition of the relevant survey universe and thus would qualify for the main questionnaire.

48. First, respondents were asked about their job responsibilities (QS6) and had to indicate that their job responsibilities involved advertising or marketing to proceed with the survey. Respondents were also asked to identify the type of company they work for (QS7), and had to indicate that the company they work for sells and advertises or markets products or services to proceed with the survey.[46]

QS6. Which of the following do you have any involvement in as part of your job responsibilities? *(Please select all that apply.)*

- ❒ Hiring/HR
- ❒ IT/Tech
- ❒ Business intelligence/Data science
- ❒ Sales or account management
- ❒ Accounting/Finance
- ❒ Advertising or Marketing
- ❒ Website/Mobile App design/development
- ❒ Customer relationship management
- ❒ Data analysis/statistics

[46] The order of the presented response options was randomized (except for "Other").

❒ Other (*specify*):

[TERMINATE IF "Advertising or Marketing" IS NOT SELECTED]

QS7. Which of the following best characterizes the type of company you work for? *(Please select only one option.)*

- ⦿ **Advertiser/Marketer** - your company sells products or services and advertises/markets its products or services
- ⦿ **Creative Agency** - your company designs or produces marketing content and/or advises clients on their creative media/marketing strategies
- ⦿ **Media Agency** - your company advises clients on their media/marketing strategies and/or how to spend their advertising funds
- ⦿ **Full Service Agency** - your company handles both Creative and Media strategy and/or execution
- ⦿ **Other** (*please describe*):

[TERMINATE IF "Advertiser/Marketer" IS NOT SELECTED]

49. Respondents were then asked about their advertising spending (QS10), and had to indicate that their company had spent at least $500,000 on all advertising, including all digital types and nondigital types, in the last 12 months in order to qualify for the survey:[47]

QS10. Approximately how much did your company spend in the last 12 months on all advertising, including all digital types (e.g., display, video, audio, social) plus all nondigital types (e.g., TV types, print, OOH, etc.)? *(Please select only one option.)*

- ⦿ Less than $10,000 **[TERMINATE]**
- ⦿ $10,000 to less than $50,000 **[TERMINATE]**
- ⦿ $50,000 to less than $100,000 **[TERMINATE]**
- ⦿ $100,000 to less than $250,000 **[TERMINATE]**
- ⦿ $250,000 to less than $500,000 **[TERMINATE]**
- ⦿ $500,000 to less than $1 million
- ⦿ $1 million to less than $3 million
- ⦿ $3 million to less than $7 million
- ⦿ $7 million to less than $15 million
- ⦿ $15 million to less than $30 million
- ⦿ $30 million to less than $50 million
- ⦿ $50 million to less than $100 million
- ⦿ $100 million to less than $250 million

[47] The order of the presented response options was rotated (except for "Don't know / Unsure").

- $250 million to less than $500 million
- $500 million or more
- Don't know / Unsure **[TERMINATE]**

50. Next, respondents were asked to estimate the percentage of their advertising budget that was spent on digital advertising (QS11). Respondents had to indicate that their business unit or team used a portion of their advertising budget on digital advertising to proceed with the survey.

> **QS11.** Please think about your business unit/team's total advertising budget. In the past year, what percentage of your business unit/team's total advertising budget was used for **digital (online) advertising**, as opposed to **offline advertising**? Please give your best estimate. *(Please enter a number from 0 to 100 for each type of advertising or select "Don't know/Unsure." Values must add up to 100%)*
>
> Percentage of budget spent on **digital (online) advertising** last year: [ ]
> Percentage of budget spent on **offline advertising** last year: [ ]
> **TOTAL** **[SHOW SUM OF NUMBERS ABOVE]**
> - Don't know / Unsure **[EXCLUSIVE]**
>
> **[TERMINATE IF DIGITAL (ONLINE) = 0]**

51. Respondents were then asked about their usage of different digital advertising types (QS12), and had to indicate that they used display advertising in the past year to proceed. To make sure that the definitions of digital advertising types in general and of display advertising in particular were clear and consistent across respondents, I provided all respondents with the same

descriptions of digital advertising types and instructed them to review the descriptions carefully:[48,49]

QS12. Which of the following types of **digital advertising**, if any, has your business unit/team used in the past year? Please review the description of each advertising type **carefully**. *(Please select all that apply.)*

	Advertising Type	Description
❐	Search	Digital ads placed on search engine result pages. Ads generally consist of a headline, description, and a link to the destination URL.
❐	Display	Digital ads made up of text, image, video, and/or other multimedia components that typically appear along the top or sides of a website, or sometimes in the middle of other content on a website. Examples of display ad formats include banner ads, animations, and interactive content. Display ads do not include ads placed on social media platforms.
❐	Email	Digital ads sent via email to current and potential customers.
❐	Digital Audio	Recorded advertisements that play between or during songs, podcasts, or other digital audio content.
❐	Social	Digital ads placed on social media platforms such as Facebook, Instagram, LinkedIn, Snapchat, and Twitter.
❐	App/In-App	Digital ads placed and displayed within mobile apps. Does not include ads placed on social media platforms.
❐	Digital Video	Includes video ads that appear before, during, or after digital content in a video player, such as YouTube.

48 List of digital advertising types and their descriptions generally based on information from: Insider Intelligence and eMarketer, "US Programmatic Digital Display Advertising Outlook 2021: Spending and Trends," (2021), at pp. 14-15; Directive Consulting, "8 Types of Digital Advertising You Should Know," https://directiveconsulting.com/blog/types-of-digital-advertising/ (viewed 10/12/2023); Indeed, "10 Types of Display Ads for Online Marketing (With Benefits)," https://www.indeed.com/career-advice/career-development/types-of-display-ads (viewed 10/12/2023); Complaint, *United States of America, et al. v. Google LLC*, Case 1:23-cv-00108, January 24, 2023, at pp. 16-17; Fourth Amended Complaint, *State of Texas, et al. v. Google LLC*, Case 1:21-md-03010, May 5, 2023, at pp. 15 and 31; Aaron Crider, "The Next Frontier Is Retail Media: Marketplace Advertising From Instacart to Walmart," https://www.wpromote.com/blog/amazon-marketing/retail-media-marketplace-advertising (viewed 10/12/2023); SendPulse, "Email Advertising," https://sendpulse.com/support/glossary/email-advertising (viewed 10/12/2023).

49 The order of the presented response options was randomized (except for "Other" and "Don't know / Unsure"). For any subsequent questions that relate to different digital advertising types, respondents were given the option to hover their mouse over the advertising types to review the descriptions presented in this screener question.

❒	Connected TV	Includes digital advertising that appears on home screens of CTV devices and in-stream video ads that appear on CTVs from platforms like Hulu, Roku and YouTube. CTVs are TV sets connected to the internet through built-in internet capability or through another device such as a Blu-ray player, game console, set-top box (e.g., Apple TV, Google Chromecast, Roku), etc.
❒	eCommerce Platforms	Digital ads that appear on eCommerce platforms, such as Amazon.com or Instacart.
❒	Other *(specify and explain):* **[INSERT TEXT BOX]**	
	⦿ Don't know / Unsure **[EXCLUSIVE]**	

[TERMINATE IF "DISPLAY" IS NOT SELECTED]

52. As shown in the table above, for the purposes of the survey, and only for the purpose of the survey, I informed survey participants that they should assume that display ads do not include ads placed on social media platforms, regardless of whether market participants may consider social media advertising to be a type of display advertising. I did not test, and do not purport to measure, whether industry participants in fact use "display" to include social, video, or other advertising types. Instead, I applied this distinction in the definition of "display" because, as directed by counsel, the purpose of this survey was, in part, to assess whether advertisers and advertising agencies would shift spend from one type of advertising to another as defined (*i.e.*, substitution), and thus the categories had to be separately delineated; it was also important to ensure a consistent understanding of the types across respondents. By excluding social media advertising from display advertising in this survey, I am not making any claim as to whether social and display advertising are part of the same antitrust market, or whether these terms have any particular use or meaning to industry participants.

53. Respondents were then asked about their usage of programmatic display advertising and direct deals (QS13); to be allowed to proceed, they had to indicate they had purchased display ad inventory through programmatic transaction methods in the past year. Similar to the previous question, I provided respondents with descriptions of display advertising and the two transaction methods to purchase display advertising:[50,51]

> **QS13.** You indicated that your business unit/team has used **display advertising** in the past year. Display ad inventory can be purchased through programmatic transaction methods or through direct deals with publishers. Please review the below descriptions about these transaction methods.
>
> **Programmatic:** Ads that are purchased programmatically are transacted and fulfilled using automation. In programmatic transactions, the price of each impression is typically determined in an auction conducted automatically before the impression is served.
>
> **Direct Deals:** Ads that are purchased through a direct negotiation, or "direct deal," with the publisher. In direct deals, the price of the ad inventory is typically set through a one-to-one negotiation between the advertiser and the publisher rather than through an auction. "Direct deals" include programmatic direct deals, such as programmatic guaranteed deals and preferred deals.
>
> Which of the following transaction methods has your business unit/team (or your ad agency) used to purchase **display ad inventory** in the past year? *(Please select all that apply.)*
>
> ❒ Programmatic
> ❒ Direct Deals
> ⦿ None of the above **[EXCLUSIVE]**
> ⦿ Don't know / Unsure **[EXCLUSIVE]**
>
> **[TERMINATE IF "PROGRAMMATIC" IS NOT SELECTED]**

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50 *See*, *e.g.*, Deepak Sharma, "Programmatic Deals," https://www.adpushup.com/blog/programmatic-vs-direct-deal/ (viewed 10/12/2023); Insider Intelligence and eMarketer, "US Programmatic Digital Display Advertising Outlook 2021: Spending and Trends," (2021), at p. 15.

51 The order of the presented response options was randomized (except for "None of the above" and "Don't know / Unsure"). For any subsequent questions that mention "Programmatic Display" and "Direct Deals" advertising types, respondents were given the option to hover their mouse over the advertising types to review the descriptions presented in this screener question.

54. If respondents indicated that they used social advertising in the last 12 months in QS12, they were then asked to select the platforms they had used for social advertising (QS14). To assess the amount of noise or "false recognition" in the survey results from respondents misidentifying social media platforms they use,[52] I included a fictional social platform that respondents could not have used ("FriendLinx") as a "decoy" or "control" name. This question provided additional information about usage of different social media platforms, but was not used to determine whether a respondent qualified for the survey.

> **QS14. [IF "SOCIAL" SELECTED IN QS12]** You indicated that you have used **social advertising** in the past year. Which of the following social media platforms, if any, has your business unit/team advertised on in the past year? *(Please select all that apply.)* [53]
>
> ❐ Facebook
> ❐ Instagram
> ❐ Pinterest
> ❐ Snapchat
> ❐ TikTok
> ❐ Twitter
> ❐ LinkedIn
> ❐ Reddit
> ❐ Tumblr
> ❐ FriendLinx
> ❐ Other social media platforms (*specify*): **[INSERT TEXT BOX]**
> ⦿ None of the above **[EXCLUSIVE]**
> ⦿ Don't know / Unsure **[EXCLUSIVE]**

55. Finally, respondents were asked to describe their personal involvement in their company's digital display advertising efforts (QS15). In order to ensure respondents could provide relevant and precise responses, respondents had to have been sufficiently involved in their company's digital display advertising decisions in the last 12 months to qualify to participate in

[52] *See, e.g.*, Goldsmith (1988); Jon A. Krosnick (1999), "Survey Research," *Annual Review of Psychology*, Vol. 50, pp. 537-567.
[53] The order of the response options was randomized (except for "Other social media platforms," "None of the above," and "Don't know / Unsure").

the survey. In particular, they had to indicate they had determined overall strategies or budgets for digital display, determined which buying tools or demand-side platforms to use for digital display, regularly used self-serve ad platforms to manage digital display campaigns, or oversaw a team or individuals that use self-serve ad platforms to manage digital display campaigns:[54]

> **QS15.** In which of the following ways have you personally been involved in your company's **digital display** advertising efforts in the **last 12 months**? *(Please select all that apply.)*
>
> - ❒ I determine overall strategies and/or budgets for digital display
> - ❒ I determine which buying tools and/or demand-side platforms (DSPs) to use for digital display
> - ❒ I regularly use self-serve ad platforms to manage digital display campaigns
> - ❒ I oversee a team/individuals that use(s) self-serve ad platforms to manage digital display campaigns
> - ❒ I regularly set up audience/target parameters for programmatic digital display buying
> - ❒ I oversee a team/individuals that set(s) up audience/target parameters for programmatic digital display buying
> - ❒ I measure results of digital display campaigns
> - ❒ I oversee a team/individuals that measure(s) results of digital display campaigns
> - ⦿ None of the above **[EXCLUSIVE]**
> - ⦿ Don't know / Unsure **[EXCLUSIVE]**
>
> **[TERMINATE IF NONE OF "**I determine overall strategies and/or budgets for digital display**", "**I determine which buying tools and/or demand-side platforms (DSPs) to use for digital display**", "**I regularly use self-serve ad platforms to manage digital display campaigns**", AND "**I oversee a team/individuals that use(s) self-serve ad platforms to manage digital display campaigns**" ARE SELECTED]**

56. Respondents were also asked a series of questions regarding their market sector and current job title or level. The information gathered from these questions was used for data analysis purposes and not for screening purposes.

[54] The order of the presented response options was randomized (except for "None of the above" and "Don't know / Unsure").

57. Consistent with the definition of the survey universe, the survey sample thus included advertisers or marketers who work for companies that sell and advertise their products or services, had spent at least $500,000 on all advertising in the past year, had spent some of their advertising budget on digital advertising in the past year, and had used programmatic display advertising in the past year. Additionally, respondents must have been personally involved in determining strategies, budgets, or ad buying tools for digital display or using self-serve ad platforms to manage digital display campaigns.

2. Main Questionnaire

58. The main questionnaire began with standard preliminary instructions, followed by questions that addressed the following topics:

- use of different digital advertising types and ad agencies;
- reactions to a hypothetical increase in the cost of programmatic display advertising;
- use of ad buying tools for programmatic display advertising; and
- methods to assess the performance of programmatic display advertising.

59. After passing the screening questions, qualified respondents were first given standard preliminary survey instructions encouraging them to select "Don't know / Unsure" if they do not feel comfortable answering a question (to minimize guessing) and instructing them not to use their browser's "Back" button (to prevent respondents from trying to change their previous answers as they progress through the survey).[55]

> **Q1.** You have been selected to answer questions about advertising practices used by your business unit, or the team you work on. For each question, if you don't know or are unsure, please don't guess. Simply indicate this in

[55] In addition, the surveys did not include a "Back" button and disabled the "Back" option in respondents' browsers to prevent respondents from changing their previous answers. *See* Appendix F.1, at F.1-2.

> your response by selecting the "Don't know / Unsure" option. There are no right or wrong answers.
>
> Also, you should complete this survey without stopping in the middle. Please make sure not to consult anyone; use your browser's "Back" button; or open another browser while working on this survey.

Questions Regarding Use of Digital Advertising Types and Ad Agencies

60. Next, respondents were asked about their use of ad agencies and their relative spending on different types of digital advertising.

61. Respondents were asked whether or not they use an ad agency for digital advertising (Q2). Respondents who indicated that they use an agency for digital advertising were asked what the ad agency helps them with:[56]

> **Q3.** For which, if any, of the following do you use an ad agency? (*Please select all that apply.)*
>
> - ❒ Content and/or creatives
> - ❒ Consulting services
> - ❒ Media/marketing strategies
> - ❒ Allocating advertising funds across advertising types
> - ❒ Budgeting decisions
> - ❒ Customer research
> - ❒ Implementation of advertising (e.g., placing bids, interacting with DSPs)
> - ❒ Tracking advertising performance
> - ❒ Inventory access
> - ❒ Running advertising tests/experiments
> - ❒ Other (*specify*): **[INSERT TEXT BOX]**
> - ⦿ None of the above **[EXCLUSIVE]**
> - ⦿ Don't know / Unsure **[EXCLUSIVE]**

62. Respondents were then asked a series of questions related to digital advertising. Respondents were presented with a list of digital advertising types they had previously indicated using in the past year in the screening questions. They were asked to allocate 100% of their digital

56 The order of the presented response options was randomized (except for "Other," "None of the above," and "Don't know / Unsure").

advertising budget across the different types of digital advertising. Specifically, they received the following instructions:[57]

> **Q4.** The following questions pertain to **digital advertising**.
>
> Previously, you mentioned that your business unit/team has used the following types of **digital advertising** in the past year. What is your best estimate of the share of your business unit/team's **digital advertising** budget that was used for each of these types of advertising in the past year? Specifically, please allocate 100% across the different types of digital advertising shown below based on the share of your total digital advertising budget spent on each type. The total should add up to 100%.
>
> To review the advertising type descriptions, hover your mouse over each digital advertising type.
>
> *(Please enter a number from 0 to 100 in each cell, or select "Don't know / Unsure." Please make sure that numbers add up to 100.)*
>
> Search: ☐
> Programmatic Display: ☐
> Direct Deals Display: ☐
> Email: ☐
> Digital Audio: ☐
> Social: ☐
> App/In-App: ☐
> Digital Video: ☐
> Connected TV: ☐
> eCommerce Platforms: ☐
> Other: ☐
> ⊙ Don't know / Unsure **[EXCLUSIVE]**

<u>Questions Regarding Responses to an Increase in the Cost of Programmatic Display Advertising</u>

63. The next questionnaire section examined whether and to what extent respondents would divert any of their advertising spending to other types of advertising in response to an

57 The order of the presented response options was randomized (except for "Other" and "Don't know / Unsure").

increase in the cost of programmatic display advertising. First, respondents were presented with a hypothetical situation in which the cost of programmatic display advertising increased by a small but significant amount and were asked whether or not they would divert spending to other advertising types (*i.e.*, make a change in their budget allocation or maintain their current budget allocation). The questions in this survey were similar to other questions that have been used by researchers in peer-reviewed and other publications relating to the "status quo bias,"[58] which examine managers' and consumers' decisions to take action versus maintaining the status quo. Many such studies have relied on a direct question in which respondents are faced with two options (or, in some cases, more than two) and are asked for their decision. For example, a study of managers in public companies presented respondents with a hypothetical situation in which they needed a new software solution and asked them to choose between an updated version of their current software package or two alternative software packages.[59] Similarly, another study presented participants with a hypothetical situation in which they inherit a portfolio of cash and securities from a relative and asked them to choose whether to retain the existing investment strategy or change to one of several presented alternative strategies.[60] The same article also examined a field study of real-life consumer choices each year to either keep their current health insurance plan or switch to another plan.[61] In addition, other studies have examined, for example,

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58 The "status quo bias" refers to the tendency to prefer keeping the status quo over making a change.

59 Sean Nicholson-Crotty, Jill Nicholson-Crotty, and Sean Webeck (2019), "Are Public Managers More Risk Averse? Framing Effects and Status Quo Bias Across The Sectors," *Journal of Behavioral Public Administration*, Vol. 2, No. 1, pp. 1-15, at pp. 6-7.

60 William Samuelson and Richard Zeckhauser (1988), "Status Quo Bias in Decision Making," *Journal of Risk and Uncertainty*, Vol. 1, No. 1, pp. 7-59, at pp. 12-13.

61 William Samuelson and Richard Zeckhauser (1988), "Status Quo Bias in Decision Making," *Journal of Risk and Uncertainty*, Vol. 1, No. 1, pp. 7-59, at pp. 26-31.

whether or not to use a resource, which essentially involves a choice between taking an action (use the resource) or not.[62,63]

64. In the current survey, the question below regarding the possible diversion of spending from one type of advertising (*i.e.*, programmatic display advertising) to other types of advertising follows a similar format to other such studies involving taking action and making changes. In addition, the current survey was designed to assess the extent to which respondents would divert spending to each other type of advertising, and differences, if any, across different forms of advertising.

65. Specifically, respondents were instructed to assume a scenario in which their analysis shows that the cost of programmatic display advertising has increased by a "small but significant amount," whereas the costs of other digital advertising types have not changed. Given this scenario, they were asked whether or not they will divert some of their spending to other types of digital advertising and if so, which types of digital advertising they will divert spending to.[64] The phrasing of this question was designed to leave it to the advertisers to consider their reaction, if any, if (what they consider to be) "a small but significant" increase in the cost of programmatic display advertising occurred.[65]

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62 *See, e.g.*, Aram Galstyan, Shashikiran Kolar, and Kristina Lerman (2003), "Resource Allocation Games with Changing Resource Capacities," *Proceedings of the Second International Joint Conference on Autonomous Agents and Multiagent Systems*, pp. 145-152. *See also* Vicki G. Morwitz, Eric Johnson, and David Schmittlein (1993), "Does Measuring Intent Change Behavior?," *Journal of Consumer Research*, Vol. 20, No. 1, pp. 46-61.

63 Other studies have also examined advertiser budgeting methods more generally. *See*, *e.g.*, Douglas West and Gerard P. Prendergast (2009), "Advertising and Promotions Budgeting and The Role of Risk," *European Journal of Marketing*, Vol. 43, No. 11/12, pp. 1457-1476.

64 The order of the presented response options was randomized (except for "Don't know / Unsure").

65 In addition, the balanced phrasing of "small but significant" avoids possible demand effects whereby respondents might have assumed that certain answers were expected or preferred. *See, e.g.,* Itamar Simonson and Ran Kivetz (2012), "Demand Effects in Likelihood of Confusion Surveys: The Importance of Marketplace Conditions," in *Trademark and Deceptive Advertising Surveys: Law, Science, and Design*, Chapter 11, Shari S. Diamond and Jerre B. Swann, Eds., American Bar Association, at p. 243. *See also* Alan G. Sawyer (1975), "Demand Artifacts in Laboratory Experiments in Consumer Research," *Journal of Consumer Research*, Vol. 1, No. 4, pp. 20-30, at pp. 20-21.

Q5. Please read carefully. Now suppose that, based on your analysis, the cost of **programmatic display advertising** has **recently increased by a small but significant amount, and will remain elevated for the foreseeable future**. Assume further that, based on similar analyses for other digital advertising types, the **costs of other digital advertising types** have **not** changed and are not expected to change.

So if the cost of programmatic display advertising increases (while the cost of other advertising types remains the same), will you or won't you divert some of your advertising spending for the coming year to other types of digital advertising?

- ⦿ Yes, I will divert some of my advertising spending for the coming year to other types of digital advertising
- ⦿ No, I will **not** divert any of my advertising spending for the coming year to other types of digital advertising **[SKIP TO Q8]**
- ⦿ Don't know / Unsure **[SKIP TO Q8]**

Q6. To which other types of digital advertising below, if any, would you divert your advertising spending for the coming year as a result of the **increase in the cost of programmatic display advertising**?[66]

To review the advertising type descriptions, hover your mouse over each digital advertising type.

(Please select all that apply.) [67]

- ❒ Search
- ❒ Direct Deals Display
- ❒ Email
- ❒ Digital Audio
- ❒ Social
- ❒ App/In-app
- ❒ Digital Video
- ❒ Connected TV
- ❒ eCommerce Platforms
- ❒ Other
- ⦿ None of the above **[EXCLUSIVE] [SKIP TO Q8]**
- ⦿ Don't know / Unsure **[EXCLUSIVE] [SKIP TO Q8]**

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66 As noted above, respondents were only asked Q6 if they indicated that they would divert spending in Q5.

67 The order of the response options was randomized (except for "Other," "None of the above," and "Don't know / Unsure").

66. After selecting which other digital advertising types they would divert spending to, respondents were asked to rate the extent of their increase on a scale of 0 to 10, with 0 labeled as "keep the same" and 10 labeled as "substantially increase." Respondents were also given the option to select "Don't know / Unsure" if they were unable to make a choice on the scale.[68]

> **Q7.** In your previous answer, you indicated that the increase in the cost of programmatic display advertising will lead you to divert some of your advertising spending to the types of digital advertising listed below.
>
> Please use the sliders below to indicate, on a scale of **0** to **10**, the extent to which you would divert (that is, increase) advertising spending for the coming year to **each type of digital advertising** that you just indicated.
>
> For each digital advertising type below, please select **0** if you expect to keep spending on that type of digital advertising for the coming year and **10** if you expect to substantially increase spending on that type of digital advertising.
>
> To review the advertising type descriptions, hover your mouse over each digital advertising type.[69]

Search	**[INSERT SLIDER]**	⦿ Don't know / Unsure
Direct Deals Display	**[INSERT SLIDER]**	⦿ Don't know / Unsure
Email	**[INSERT SLIDER]**	⦿ Don't know / Unsure
Digital Audio	**[INSERT SLIDER]**	⦿ Don't know / Unsure
Social	**[INSERT SLIDER]**	⦿ Don't know / Unsure
App/In-app	**[INSERT SLIDER]**	⦿ Don't know / Unsure
Digital Video	**[INSERT SLIDER]**	⦿ Don't know / Unsure
Connected TV	**[INSERT SLIDER]**	⦿ Don't know / Unsure
eCommerce Platforms	**[INSERT SLIDER]**	⦿ Don't know / Unsure
Other	**[INSERT SLIDER]**	⦿ Don't know / Unsure

67. Below is an example of how this question appeared to respondents taking the survey:[70]

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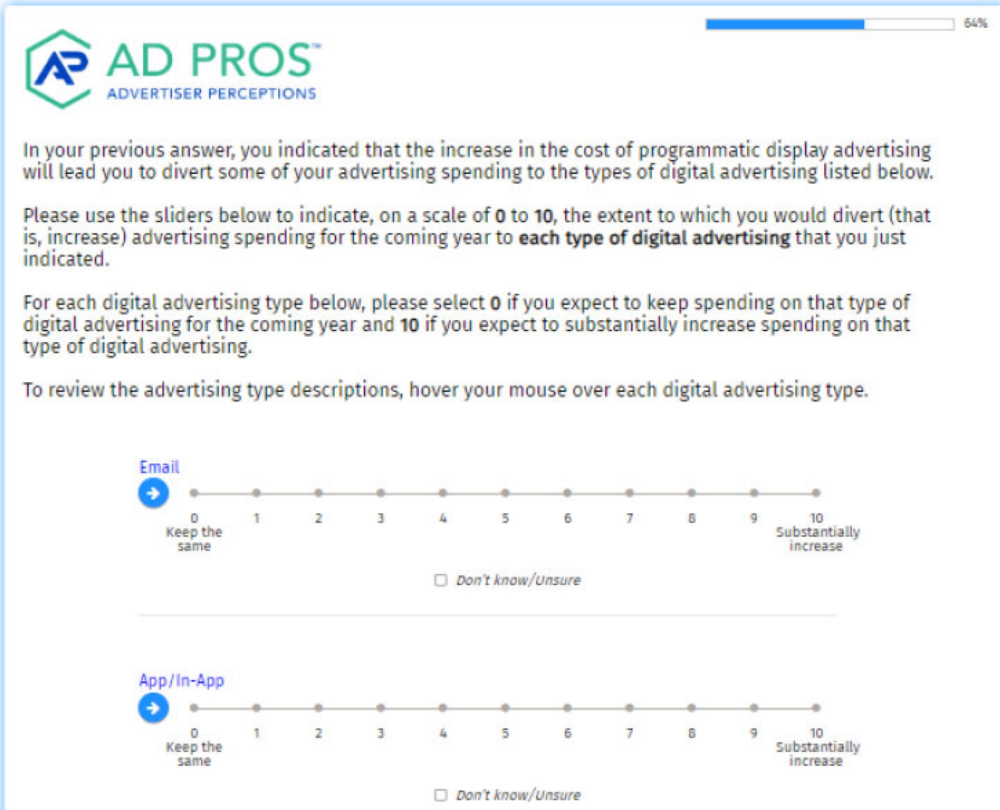
68 The response options in Q7 were presented in the same order as those presented in Q6, which was randomized.
69 As noted above, respondents were only asked Q7 if they indicated that they would divert spending in Q5.
70 Appendix F.2, at F.2-24.



Questions Regarding the Use of Ad Buying Tools for Programmatic Display Ads

68. Respondents moved on to a series of questions about their current and expected future use of ad buying tools for programmatic display. These questions were designed to explore which ad buying tools were most commonly used, the number of ad buying tools used, anticipated changes in the number of ad buying tools that would be used next year, and respondents' motivations for these decisions.[71]

69. Respondents were first shown a description of an ad buying tool and asked which ad buying tools[72] they have used in the past year. Respondents were provided with a list of ad

[71] The concept of multi-homing (*i.e.*, using multiple platforms) in advertising has been discussed in the marketing literature. *See*, *e.g.*, David S. Evans (2003), "The Antitrust Economics of Multi-sided Platform Markets," *Yale Journal on Regulation*, Vol. 20, pp. 325-381, at pp. 346-348.

[72] The list of ad buying tools was, in part, based on GOOG-DOJ-AT-02524665-749, at 679-681 (which identified Google Display and Video 360, Amazon DSP, The Trade Desk DSP, Verizon Media DSP, Adobe Advertising Cloud, Amobee, MediaMath DSP, AcuityAds, Adform, Adelphic, Beeswax, Criteo, Quantcast, StackAdapt,

buying tools, as well as options for "Other" (which allowed respondents to type in the name of an ad buying tool not listed), and "Don't know / Unsure." To assess the amount of noise or "false recognition" in the survey results from respondents misidentifying ad buying tools they use,[73] I included two fictional ad buying tools that respondents could not have used ("Ad Step Technologies" and "Quorexx") as "decoy" or "control" names.

> **Q8.** An ad buying tool is a programmatic advertising platform that allows advertisers and media buying agencies to bid automatically on display ad inventory from a wide range of publishers. Some ad buying tools can also be used to buy video and search ad inventory. Ad buying tools include demand side platforms, or "DSPs."
>
> Which of the following ad buying tools, if any, have you and/or your business unit/team used during the **past year** for **programmatic display advertising**? *(Please select all that apply.)*[74]
>
> - ❒ Google Ads
> - ❒ Google Display and Video 360 (DV360)
> - ❒ illumin (formerly AcuityAds)[75]
> - ❒ Adelphic
> - ❒ Adform
> - ❒ Adobe Advertising Cloud
> - ❒ Amazon DSP
> - ❒ Amobee
> - ❒ Basis by Centro
> - ❒ Beeswax
> - ❒ Criteo
> - ❒ MediaMath DSP
> - ❒ Outbrain
> - ❒ Quantcast
> - ❒ Simpli.fi
> - ❒ StackAdapt
> - ❒ Taboola

Xandr Invest, Zeta Global, Simpli.fi, and Basis by Centro, among others); Pasha Abdulov, "16 Top DSP Integrations and Ad Exchanges," https://growthchannel.io/blog/top-dsp-integrations-ad-exchanges (viewed 9/27/2023) (which additionally identified Taboola and Outbrain).

[73] *See, e.g.,* Goldsmith (1988); Jon A. Krosnick (1999), "Survey Research," *Annual Review of Psychology*, Vol. 50, pp. 537-567.

[74] The order of the response options was randomized (except for "Other" and "Don't know / Unsure").

[75] In April 2023, AcuityAds announced a full rebrand to "illumin." *See* illumin, "Journey Advertising Platform," https://illumin.com/company-overview/ (viewed 9/27/2023); Yahoo Finance, "AcuityAds Announces Full Rebrand to illumin, Following Successful Launch of its Journey Advertising Platform," https://finance.yahoo.com/news/acuityads-announces-full-rebrand-illumin-120000429.html (viewed 9/27/2023).

❒ The Trade Desk DSP
❒ Yahoo DSP (formerly Verizon Media DSP)[76]
❒ Xandr Invest
❒ Zeta Global
❒ Quorexx
❒ Ad Step Technologies
❒ Other (please specify): **[TEXT BOX]**
⦿ Don't know / Unsure **[EXCLUSIVE] [SKIP TO Q17]**

70. If respondents indicated that they use more than one ad buying tools for programmatic display advertising, they were presented with an open-ended question to explain their reason for doing so.

> **Q9.** Why did you and/or your business unit/team use more than one ad buying tool for **programmatic display advertising** in the past year? *(Please type in your response, or select "Don't know / Unsure".)*

71. Next, respondents were asked about their expected use of ad buying tools next year:[77]

> **Q10.** Do you and/or your business unit/team expect to use the same number, more, or fewer ad buying tools for **programmatic display advertising** next year? *(Please select only one option.)*
>
> ⦿ I expect to use **more** ad buying tools for programmatic display advertising next year.
> ⦿ I expect to use **fewer** ad buying tools for programmatic display advertising next year.
> ⦿ I expect to use the **same number** of ad buying tools for programmatic display advertising next year.
> ⦿ Don't know / Unsure

72. If respondents indicated that they planned to change the number of ad buying tools, they were asked to elaborate on their selection through an open-ended question:

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[76] In September 2021, Verizon Media DSP was renamed Yahoo DSP as part of its acquisition by private equity firm Apollo Global Management from Verizon. *See* TapClicks, "Yahoo! DSP – Support Guide," https://support.tapclicks.com/hc/en-us/articles/4402116928795-Yahoo-DSP-Support-Guide (viewed 9/27/2023); The Verge, "Yahoo is Yahoo Once More After New Owners Complete Acquisition," https://www.theverge.com/2021/9/2/22653652/yahoo-aol-acquired-apollo-global-management-private-equity (viewed 9/27/2023).

[77] The order of the response options was randomized (except for "Don't know / Unsure").

> **Q11**. You indicated that, compared to the past year, you expect to use **[PIPE IN BASED ON ANSWER IN Q10: "more" or "fewer"]** ad buying tools for programmatic display advertising next year. Why do you and/or your business unit/team expect to use **[PIPE IN BASED ON ANSWER IN Q10: "more" or "fewer"]** ad buying tools for programmatic display advertising next year? *(Please type in your response, or select "Don't know / Unsure".)*

73. Respondents were then presented with a closed-ended question to gather information on the factors that they consider when choosing an ad buying tool for programmatic display:[78,79]

> **Q12.** Which of the following factors, if any, do you and/or your business unit/team consider when deciding to use a particular ad buying tool for **programmatic display advertising**? *(Please select all that apply)*
>
> - ❒ Ad placement effectiveness
> - ❒ Audience scale / Reach
> - ❒ Ease of use / User interface
> - ❒ Targeting criteria and capabilities
> - ❒ Reporting features
> - ❒ Forecasting tools
> - ❒ Budget management tools
> - ❒ API and integrations
> - ❒ Troubleshooting capabilities
> - ❒ Media optimization of placements during a campaign
> - ❒ Brand safety / fraud protection
> - ❒ Identity management
> - ❒ Support
> - ❒ Cost
> - ❒ Other (*please specify*): **[TEXT BOX]**
> - ⦿ Don't know / Unsure **[EXCLUSIVE]**

74. Next, respondents were shown a series of questions assessing whether they stopped or started using any ad buying tools for programmatic display in the past year and what factors led them to make such a decision:[80]

---

78 The list of factors presented in this closed-ended question was adapted from lists of "determining drivers influencing plans to use DSPs." GOOG-DOJ-11021167-216, at 190-191; GOOG-DOJ-AT-02524665-749, at 706.

79 The order of the response options was randomized (except for "Other" and "Don't know / Unsure").

80 The order of the response options in each of Q13 and Q15 was randomized (except for "Don't know / Unsure").

Q13. Have you and/or your business unit/team stopped using any ad buying tool(s) for **programmatic display advertising** in the **past year**? *(Please select only one option.)*

- ⦿ Yes, I and/or my business unit/team stopped using at least one ad buying tool in the past year
- ⦿ No, I and/or my business unit/team have **not** stopped using any ad buying tools in the past year
- ⦿ Don't know / Unsure

Q14. [IF YES IN Q13] You indicated that you and/or your business unit/team stopped using at least one ad buying tool in the **past year** for **programmatic display advertising**. What factors led you and/or your business unit/team to stop using one or more ad buying tools for **programmatic display advertising**? *(Please type your response in the text box below, or select "Don't know / Unsure".)*

Q15. Have you and/or your business unit/team started using any ad buying tool(s) in the **past year** for **programmatic display advertising**? *(Please select only one option.)*

- ⦿ Yes, I and/or my business unit/team started using at least one ad buying tool in the past year
- ⦿ No, I and/or my business unit/team have **not** started using any ad buying tools in the past year
- ⦿ Don't know / Unsure

Q16. [IF YES IN Q15] You indicated that you and/or your business unit/team started using at least one ad buying tool in the **past year** for **programmatic display advertising**. What factors led you and/or your business unit/team to start using one or more ad buying tools for **programmatic display advertising**? *(Please type your response in the text box below, or select "Don't know / Unsure".)*

Questions Regarding the Assessment of Programmatic Display Ad Performance

75. After completing the questions about ad buying tools, respondents were asked about their assessment of the performance of programmatic display ads. Respondents were asked to select the metrics that they use to assess the performance of each of their programmatic display

ads, direct deals ads, social media ads, and digital video ads, if they indicated using the advertising type in the screener.[81]

Q17. Which of the following metrics, if any, are you and/or your business unit/team using to assess the performance of **programmatic display ads, direct deals display ads, social media ads**, and/or **digital video ads**?

To review the advertising type descriptions, hover your mouse over each digital advertising type.
(Please select all that apply in each column.)

Metric	Programmatic display ads	Direct deals display ads	Social media ads	Digital video ads
Impressions	❒	❒	❒	❒
Clicks	❒	❒	❒	❒
Conversions	❒	❒	❒	❒
Cost per impression (CPM)	❒	❒	❒	❒
Cost per click (CPC)	❒	❒	❒	❒
Cost per action (CPA)	❒	❒	❒	❒
Return on Ad Spend (ROAS)	❒	❒	❒	❒
Return on Investment (ROI)	❒	❒	❒	❒
Click through rate (CTR)	❒	❒	❒	❒
Other (*please specify*): **[TEXT BOX]**	❒	❒	❒	❒
None of the above **[EXCLUSIVE]**	⦿	⦿	⦿	⦿
Don't know / Unsure **[EXCLUSIVE]**	⦿	⦿	⦿	⦿

76. If respondents indicated they used more than one metric for programmatic display ads, they were then asked to rank the selected metrics in terms of their importance to assessing the performance of programmatic display ads. Specifically, they were shown the following instructions:

Q18. You indicated that you and/or your business unit/team use the following metrics to assess the performance of **programmatic display ads**. Please rank these metrics in terms of **how important they are to accurately assessing the performance of programmatic display ads**, with 1 being the most important and **[NUMBER OF MEASURES**

[81] The orders of the columns and rows were randomized (except for "Other," "None of the above," and "Don't know / Unsure").

> **SELECTED IN Q17]** being the least important. *(Please rank the following metrics, or select "Don't know / Unsure".)*

77. In addition to the metrics used, the frequency at which respondents measure or assess the performance of their programmatic display ads is also informative. If respondents use an ad agency for such purposes, they were instructed to indicate the frequency at which they receive information on the performance of the programmatic display ads.[82]

> **Q19.** How often, if at all, do you and/or your business unit/team measure or assess the performance of your **programmatic display advertising**? *(Please select only one option.)*
>
> If you are using an ad agency and they are responsible for measuring or assessing performance of your programmatic display advertising, please indicate how often you receive information about the performance of your programmatic display advertising from the agency.
>
> - ⦿ Daily
> - ⦿ Weekly
> - ⦿ Monthly
> - ⦿ Quarterly
> - ⦿ Annually
> - ⦿ Don't know / Unsure

78. Lastly, respondents were asked whether they ran any experiments on their programmatic ads in the past year and, if applicable, what types of experiments they ran.

> **Q20.** In the past year, have you and/or your business unit/team run any experimental or test & learn initiatives on your **programmatic display ads**? *(Please select only one option.)*[83]
>
> - ⦿ Yes
> - ⦿ No
> - ⦿ Don't know / Unsure
>
> **Q21. [IF YES IN Q20]** Which of the following types of experiments or test & learn initiatives, if any, have you and/or your business unit/team run in the past year on your **programmatic display ads**?

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[82] The order of the response options was randomized (except for "Don't know / Unsure").
[83] The order of the response options was randomized (except for "Don't know / Unsure").

I and/or my business unit/team have run experiments and/or test & learn initiatives testing… *(Please select all that apply.)* [84]

- ❒ Creatives
- ❒ Bid strategies
- ❒ Audiences
- ❒ Publishers
- ❒ Ad buying tool performance
- ❒ ROI/ROAS
- ❒ Other (*please specify*): **[TEXT BOX]**
- ⦿ Don't know / Unsure **[EXCLUSIVE]**

Follow-up Disclosure and Participation Question

79. At the conclusion of the survey, respondents were presented with a disclosure about the sponsor of the survey and its connection to pending antitrust lawsuits and were given the option to exclude their responses from the survey. This question was included at the end of the survey to avoid introducing any potential bias in the survey responses due to demand effects whereby respondents might have assumed that certain answers were expected or preferred.

80. Specifically, respondents were shown the following screen, which concluded the survey: [85]

QF1. This survey is being conducted by consultants that have been retained on behalf of Google in connection with pending antitrust lawsuits in which the plaintiffs allege that Google engaged in anticompetitive conduct related to digital advertising.

If you are willing to participate in this survey, please click "Include my responses" below. As a reminder, your responses will be kept anonymous and will be analyzed as part of a larger sample of responses.

If you do not want to participate in this survey, please click "Exclude my responses" below.

- ⦿ Include my responses
- ⦿ Exclude my responses

84 The order of the response options was randomized (except for "Don't know / Unsure").
85 The order of the response options was randomized.

81. It is noteworthy that there is no reason to expect the respondents who chose, at the conclusion of the survey, to not be included in the final sample to be different from the other respondents. Considering that respondents were asked to describe their advertising practices and considerations, and they were not asked to evaluate any particular company, there is no reason to expect those who chose to not be included in the sample to be different in any systematic way or in any way that pertains to the surveys' conclusions from other respondents. In fact, some research has found that identifying the survey sponsor to respondents has no meaningful effect on the content of the survey responses.[86] For example, in this survey, one would be hard-pressed to come up with a scenario whereby those respondents who used fewer advertising buying tools would be systematically more likely to indicate that they prefer to not be included in the sample.

C. Survey Findings

82. In this section, I will summarize the main survey findings for the Higher-Spend Advertiser Survey. Additional findings can be found in Exhibits 1 to 36. The complete data set of all individual participants' responses is presented in Appendix F.3.

83. A total of 603 respondents completed the survey.[87] Of those, 94 respondents chose to exclude their responses from the survey.[88] Consistent with common practice, 7 respondents

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86 Charles Crabtree, Holger L. Kern, and Matthew T. Pietryka (2022), "Sponsorship Effects in Online Surveys," *Political Behavior*, Vol. 44, pp. 257-270; Del I. Hawkins (1979), "The Impact of Sponsor Identification and Direct Disclosure of Respondent Rights on the Quantity and Quality of Mail Survey Data," *Journal of Business*, Vol. 52, No. 4, pp. 577-590.

87 Exhibit 1. AP removed two respondents who did not meet their internal quality control metrics. These respondents provided what AP determined to be nonsensical responses to open-ended questions, such as "R5U54U" and "The study is quite nice to carry on." These respondents were not included in the 603 respondents considered to have completed the survey.

88 Exhibit 1. Respondents who selected "Exclude my responses" in QF1 were not included in the respondent-level data files provided to me by Advertiser Perceptions and thus I do not have access to their responses to other questions in the survey.

who took too little time (less than 100 seconds) or took too much time (3 hours or more) were removed from the sample.[89] A total of 502 respondents are included in the summary tables.[90]

84. In total, approximately 27 percent of respondents were women and 73 percent were men.[91] With respect to age, approximately 20 percent of respondents were between 18 and 34, 67 percent were between 35 and 49, and 13 percent were 50 years old or older.[92] Approximately 32 percent of respondents indicated that their current job title/level was best described as "Director," 24 percent selected "C-Level (CEO, COO, CMO, etc.)," 20 percent selected "Vice President, SVP, EVP, President, etc.," and 14 percent selected "Manager."[93] Approximately 50 percent of respondents spent between $500,000 to $15 million on advertising in the last 12 months, and 50 percent spent more than $15 million on advertising in the last 12 months.[94]

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89 Exhibit 1. Changing these cutoffs to, for example, three minutes and two hours does not meaningfully impact the results. *See* Exhibit 105.

90 Exhibit 1. As noted above, two survey questions included "decoy" response options: QS14 regarding the use of different social media platforms (including "FriendLinx" as a decoy response option) and Q8 regarding the use of different ad buying tools (including "Quorexx" and "Ad Step Technologies" as decoy response options). Overall, approximately 10 percent of respondents selected at least one of the three decoy response options. *See* Appendix J, at Exhibit 1. Given that these selections might have been inadvertent, these respondents were not excluded from the analytical sample. In Appendix J, I present an alternative set of results for all questions based on an analytical sample that excludes respondents who selected one or more decoy response options in QS14 or Q8. As shown, excluding these respondents has virtually no effect on the results (and the difference is not statistically significant).

91 Exhibit 3.

92 Exhibit 3.

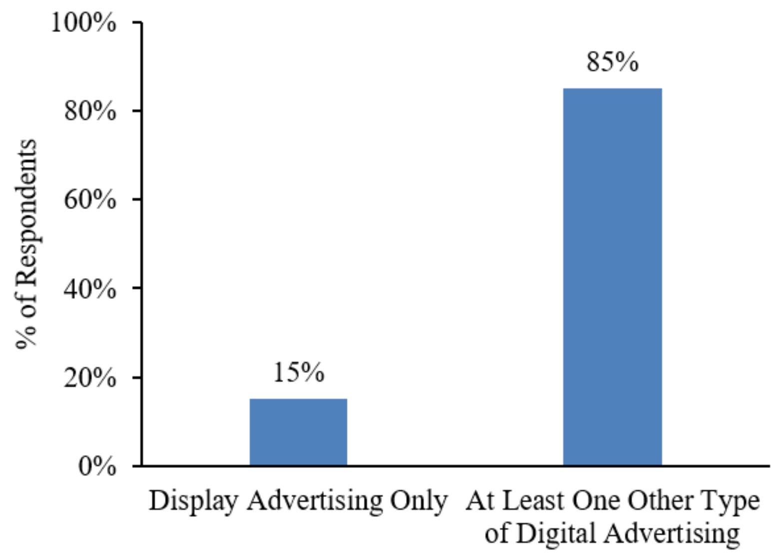
93 Exhibit 5.

94 Exhibit 6. Calculated as (31 + 78 + 57 + 87) / 502 = 50.4 percent and (74 + 68 + 43 + 33 + 21 + 10) / 502 = 49.6 percent. As discussed above, for the Higher-Spend Advertiser Survey, in order to generate sufficiently large sample sizes across different spending levels, AP generated a sample with equal proportion of respondents within the $500,000 to $15,000,000 annual ad spend range and the $15,000,000+ annual ad spend range. However, AP applied their standard practice to generate a representative sample within those sub-groups.

Use of Digital Advertising Types and Ad Agencies

85. As noted above, all respondents had to indicate they use display advertising in order to qualify for the survey.[95] As shown in Figure 8, in addition to display advertising,[96] approximately 85 percent of respondents used at least one other type of digital advertising.[97]

Figure 8. Share of Higher-Spend Advertisers Using More than One Type of Digital Advertising



Notes and Sources: Exhibit 9.

86. As shown in Figure 9, the most popular other types of digital advertising were social advertising (76 percent of respondents), search advertising (75 percent of respondents), digital video advertising (65 percent of respondents), and email advertising (61 percent of respondents).[98]

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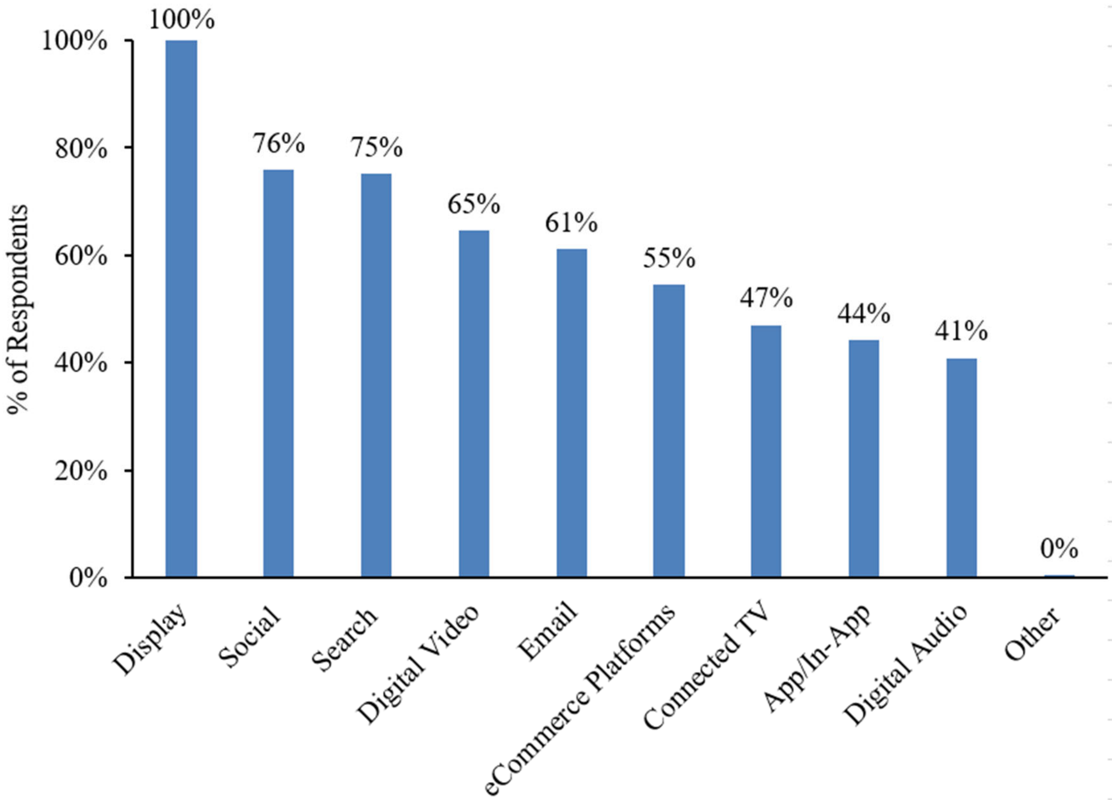
95 *See* Appendix F.1, at F.1-7.

96 As described in paragraph 52, the definitions of advertising types were created for purposes of these surveys only, in order to test—among other things—the degree to which advertisers viewed certain types of ads, including ads shown on social media platforms, as substitutes for other types of display ads. I did not conduct a survey to determine how advertisers use the terms "display" or "social."

97 Exhibit 9. Most advertisers used 5 or more digital advertising types.

98 Exhibit 8.

Figure 9. Share of Higher-Spend Advertisers Using Digital Advertising Types



Notes and Sources: Exhibit 8. All respondents must have used display advertising in the past year to qualify for survey participation.

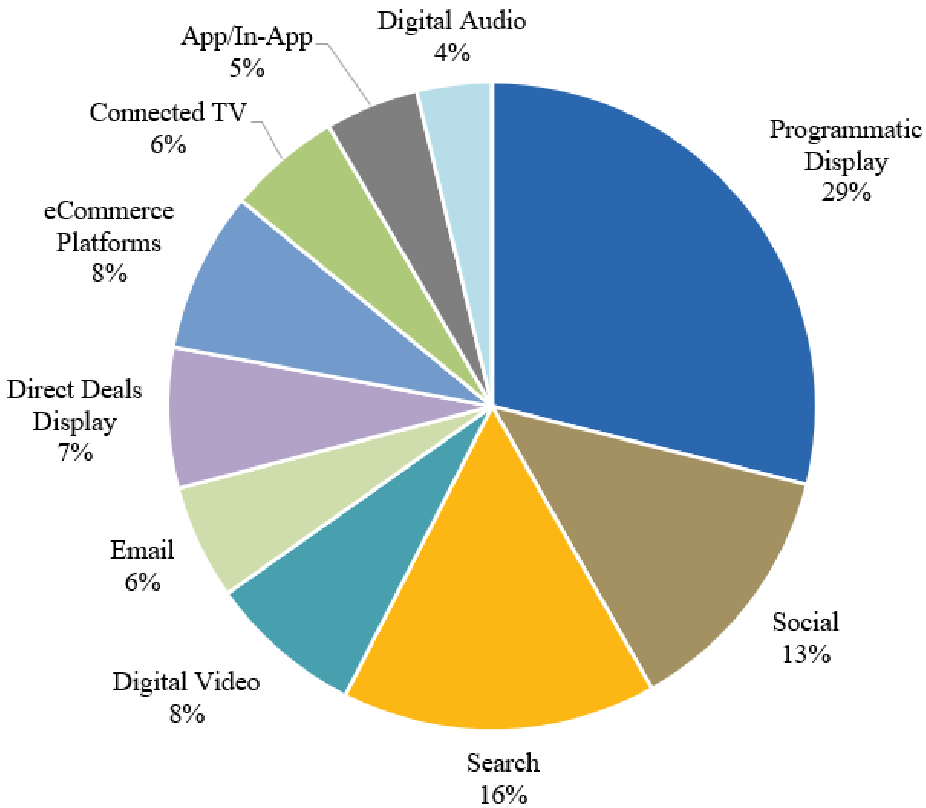
87. In QS13, approximately 59 percent of respondents indicated that they used both programmatic buying methods and direct deals to purchase display ad inventory.[99]

88. In Q4, respondents were asked to estimate the share of their digital advertising budget spent on each digital advertising type over the past year. As shown in Figure 10, the responses to this question indicate that programmatic display advertising accounted for an average of approximately 29 percent of respondents' overall digital advertising budgets over the past

99 Exhibit 10.

year.[100] Programmatic display advertising accounted for a median of approximately 15 percent of respondents' overall digital advertising budgets over the past year.[101]

Figure 10. Average Share of Budget Allocated to Each Advertising Type Among Higher-Spend Advertisers



Notes and Sources: Exhibit 14. All respondents must have used programmatic display in the past year to qualify for the survey. Values sum to 100%. Displayed values are rounded to the nearest percent and may appear to sum to greater or less than 100 percent after rounding.

89. Approximately 67 percent of respondents indicated that they use an ad agency for digital advertising.[102] The most common ways in which respondents use ad agencies include assistance with "Media/marketing strategies" (68 percent of respondents using ad agencies), "Implementation of advertising" (63 percent of respondents using ad agencies), "Tracking

[100] Exhibit 14.
[101] Exhibit 14.
[102] Exhibit 12.

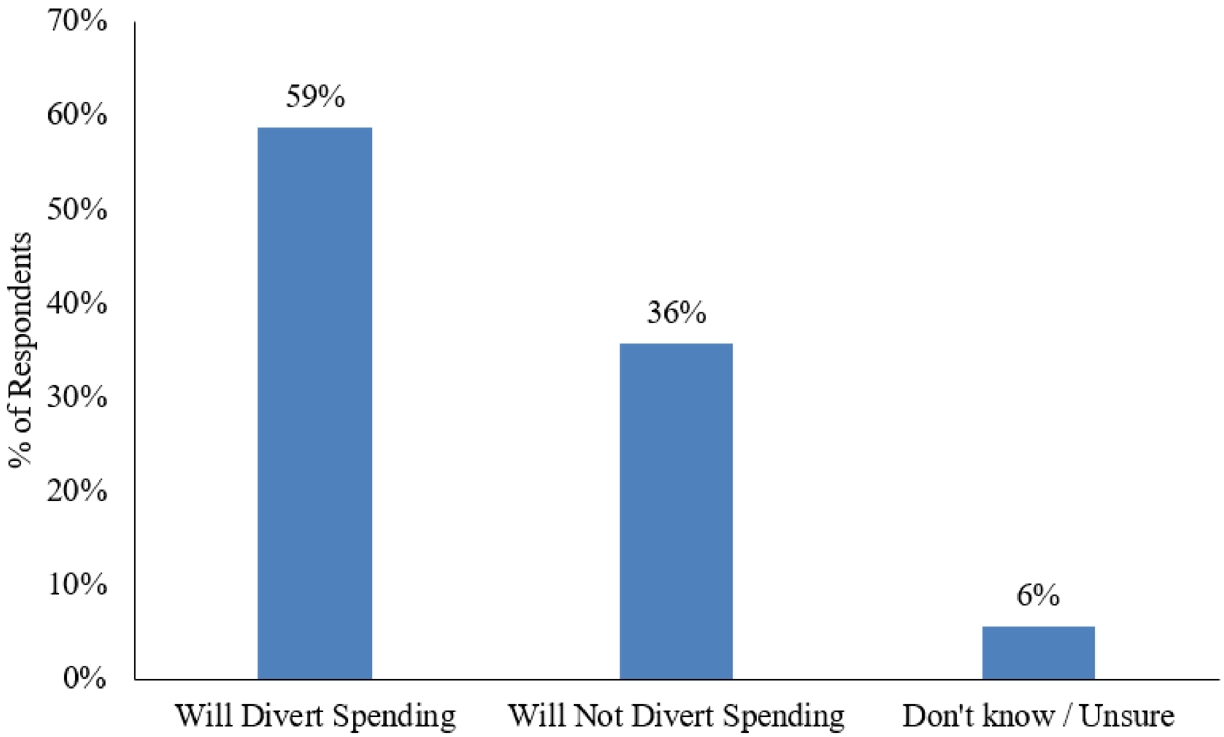
advertising performance" (58 percent of respondents using ad agencies), and "Running advertising tests/experiments" (53 percent of respondents using ad agencies).[103]

Responses to an Increase in the Cost of Programmatic Display Advertising

90. Question Q5 described a scenario in which the cost of programmatic display advertising recently increased by a small but significant amount and would remain elevated for the foreseeable future (while the cost of other advertising types had not changed and were not expected to change), and asked respondents whether or not they would divert some of their advertising spending for the coming year to other types of digital advertising. In response to this scenario, approximately 59 percent of respondents indicated that they would divert some of their spending to other types of digital advertising, as shown in Figure 11.[104]

103 Exhibit 13.
104 Exhibit 15.

Figure 11. Share of Higher-Spend Advertisers Who Would Divert Spending

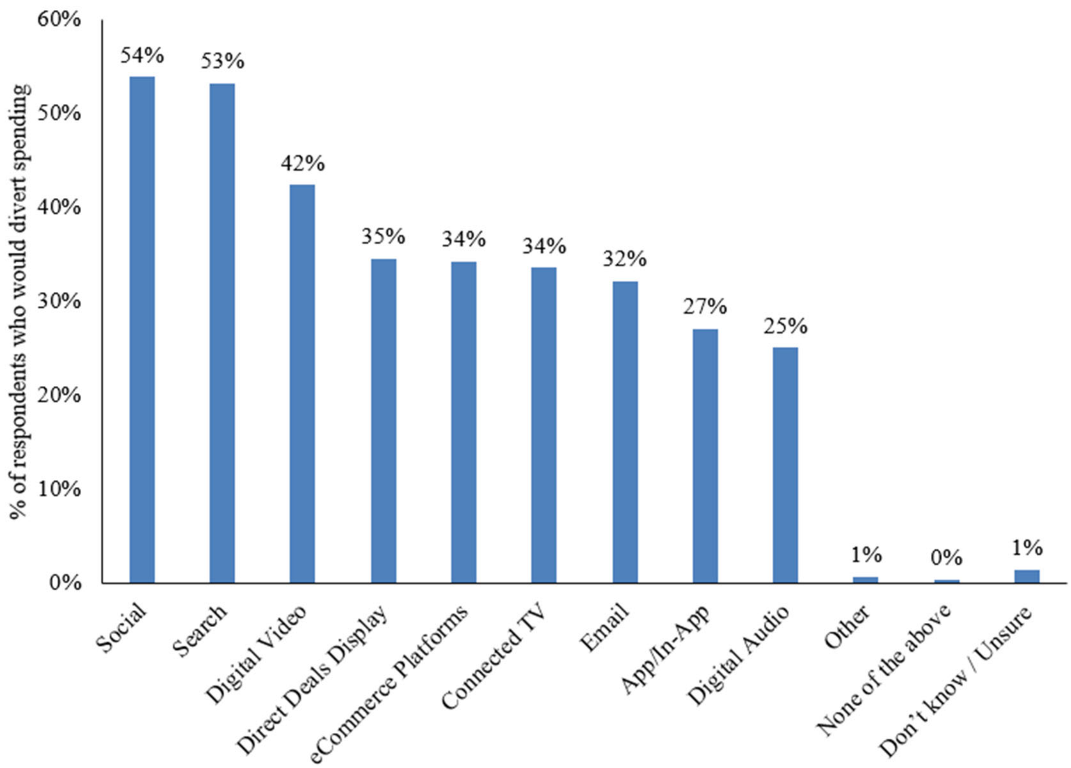


Notes and Sources: Exhibit 15. Values sum to 100%. Displayed values are rounded to the nearest percent and may appear to sum to greater or less than 100 percent after rounding.

91. Respondents who indicated that they would divert spending were then asked in Q6 to identify to which types of advertising they would divert spending. As shown in Figure 12, the most common responses were social (54 percent of respondents who would divert spending), search (53 percent of respondents who would divert spending), and digital video (42 percent of respondents who would divert spending).[105]

[105] Exhibit 16.

Figure 12. Share of Higher-Spend Advertisers Who Would Divert Spending to Each Advertising Type

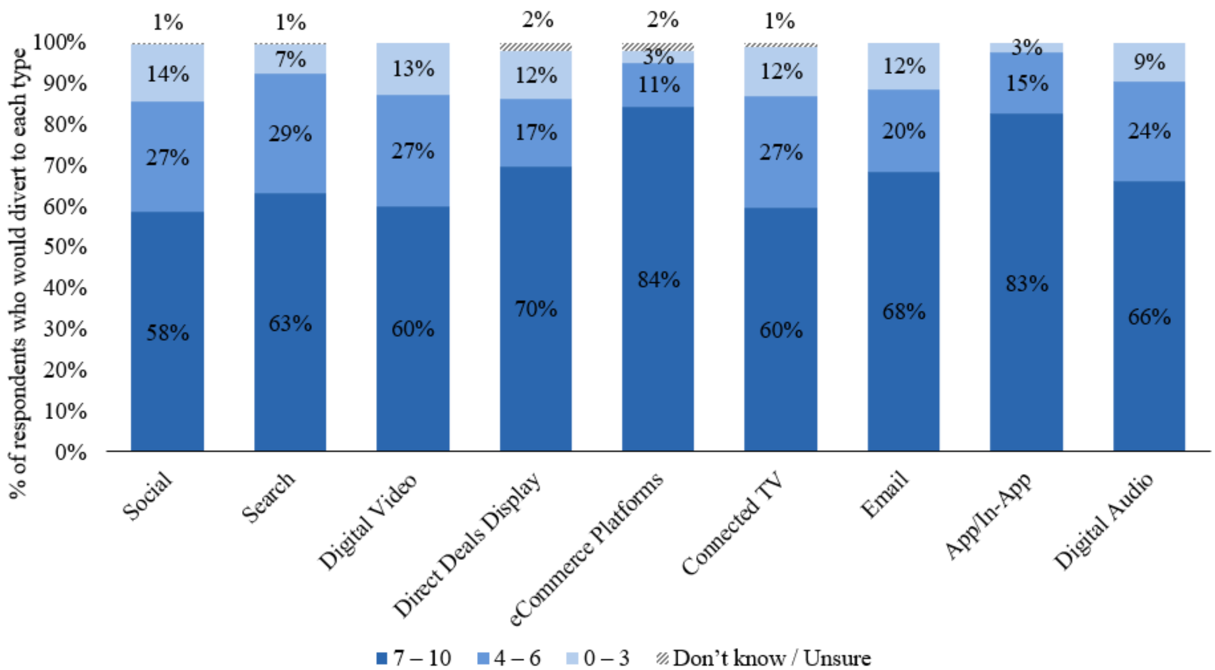


Notes and Sources: Exhibit 16.

92. In Q7, most respondents indicated that the extent to which they would divert spending to each advertising type selected in Q6 was between 7 and 10 on a 0 to 10 point scale (where 0 represents no change in spending on a given type of advertising, and 10 represents a substantial increase in spending on a given type of advertising).[106] In other words, most respondents indicated that they would make relatively substantial increases to their spending on other types of advertising in response to an increase in the cost of programmatic display advertising.

[106] Exhibit 19.

Figure 13. Share of Higher-Spend Advertisers by Extent of Spending Increase (0 to 10 scale)



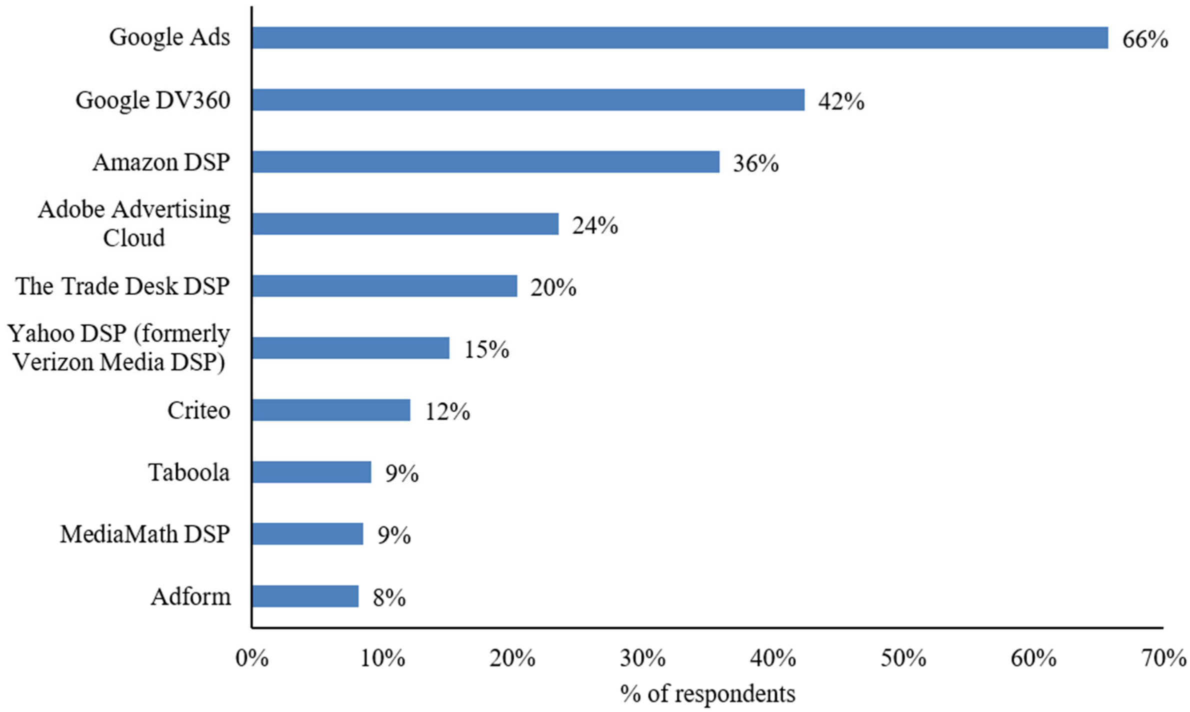
Notes and Sources: Exhibit 19. Values sum to 100% for each type. Displayed values are rounded to the nearest percent and may appear to sum to greater or less than 100 percent after rounding. Two respondents (approximately 1 percent of respondents who would divert) indicated diverting to "Other" and rated the extent of the increase at 3 and 6 on a 10 point scale. Exhibits 17 and 18.

Use of Ad Buying Tools for Programmatic Display Ads

93. In response to Q8 regarding usage of different ad buying tools, the most commonly used ad buying tools for programmatic display advertising were Google Ads (66 percent of respondents), Google DV360 (42 percent of respondents), Amazon DSP (36 percent of respondents), Adobe Advertising Cloud (24 percent of respondents), and The Trade Desk DSP (20 percent of respondents).[107] These results are illustrated in Figure 14 below.

[107] Exhibit 20. Approximately 75 percent of respondents used at least one of Google Ads and Google DV360. Exhibit 22.

Figure 14. Share of Higher-Spend Advertisers Using Ad Buying Tool (10 Most Popular Ad Buying Tools)



Notes and Sources: Exhibit 20.

94. As noted above, "Ad Step Technologies" and "Quorexx" were included as decoy/control ad buying tool names in Q8. Approximately 6 percent of respondents indicated that they used Ad Step Technologies and 4 percent of respondents indicated that they used Quorexx, validating that most respondents were attentive and provided probative responses.[108] In addition, QS14 regarding social media platform usage included a decoy social media platform "FriendLinx," and less than 2 percent of respondents selected this option.[109] Overall, approximately 10 percent of respondents in the analytical sample selected at least one of the three decoy response options.[110] In this section, I present certain results regarding use of multiple buying tools both including and

108 Exhibit 20.
109 *See* Exhibit 11.
110 A total of 49 respondents selected at least one decoy response option (or approximately 10 percent of the overall analytical sample of 502 respondents). *See* Appendix J, at Exhibit 1.

excluding respondents who selected one or more decoy response options. As demonstrated below, the main results are very similar regardless of whether respondents who selected one or more decoy response options are included in or excluded from the analysis.[111] Given that these selections might have been inadvertent, these respondents were not excluded from the analytical sample.[112]

95. Across the full analytical sample, approximately 75 percent of respondents indicated using more than one ad buying tool for programmatic display advertising.[113] Respondents reported using an average of 3.1 ad buying tools in the past year.[114] In response to an open-ended question regarding why they used multiple ad buying tools, respondents mentioned a variety of different reasons. For example, some respondents mentioned testing the relative performance of different tools (*e.g.*, Respondent 1396: "Provide better ad results by testing and comparing the effectiveness of different tools"; Respondent 1727: "Test which performed the best"; Respondent 2431: "We wanted to test different tools to see which one yielded the best results.").[115] Other respondents mentioned seeking specific ad buying tool features (*e.g.*, Respondent 1158: "Different ad buying tools may have different functions and features"; Respondent 4513: "For a wider variety of features").[116]

111 *See also* Appendix J.

112 An alternative set of results for all questions based on an analytical sample that excludes respondents who selected one or more decoy response options is in Appendix J.

113 Exhibit 21. The decoy ad buying tools were not included in the count of ad buying tools used by each respondent. In other words, if a respondent indicated using The Trade Desk DSP, Google DV360, and Quorexx, he or she was considered to use only two ad buying tools (The Trade Desk DSP and Google DV360).

114 Exhibit 21. This result is similar to the results of Advertiser Perceptions' own surveys, though the target population and question language differ somewhat from that of the Higher-Spend Advertiser Survey. For example, a survey conducted by Advertiser Perceptions in the first half of 2022 found that respondents used an average of approximately 3.5 demand-side platforms. In order to qualify for Advertiser Perceptions' survey, respondents had to be employed in the U.S., be involved in the purchase of programmatic advertising, used or plan to work with demand-side platforms in the past/next 12 months, and have a minimum of $1 million annual digital ad spend. Advertiser Perceptions' survey asked about usage of demand-side platforms (DSPs) generally, whereas my Higher-Spend Advertiser Survey asked about usage of ad buying tools for programmatic display advertising. GOOG-AT-MDL-008928829-914, at 831, 845, 875.

115 Appendix F.3.

116 Appendix F.3.

96. Such respondents' explanations are consistent with my published research as well as with a great deal of other research.[117] When simultaneously making multiple choices, such as the choice of products or advertising tools, especially under uncertainty regarding the performance of each selected item, decision makers tend to select variety. This finding has been confirmed and relied upon in a variety of domains, such as with respect to financial investments and other decisions involving menus of options.[118] The selected menu of options (or advertising tools) may include items that are different in some respects, yet they serve to provide a safer, more effective overall solution as well as experimental data regarding the effectiveness of alternative options.

97. Excluding respondents who selected one or more decoy response options from the analysis, approximately 74 percent of respondents indicated using more than one ad buying tool for programmatic display advertising.[119] Respondents reported using an average of 2.8 ad buying tools.[120]

98. Users of Google ad buying tools also indicated using multiple ad buying tools. As illustrated in Figure 15 below, for the full analytical sample, approximately 87 percent of respondents who use Google Ads indicated using at least one other ad buying tool for programmatic display and 76 percent of respondents who use Google Ads indicated using at least

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[117] Itamar Simonson (1990), "The Effect of Purchase Quantity and Timing on Variety-Seeking Behavior," *Journal of Marketing Research*, Vol. 27, No. 2, pp. 150-162; Itamar Simonson and Russell S. Winer (1992), "The Influence of Purchase Quantity and Display Format on Consumer Preference for Variety," *Journal of Consumer Research*, Vol. 19, No. 1, pp. 133-138. *See also* Daniel Read and George Loewenstein (1995), "Diversification Bias: Explaining the Discrepancy in Variety Seeking Between Combined and Separated Choices," *Journal of Experimental Psychology: Applied*, Vol. 1, No. 1, pp. 34-49.

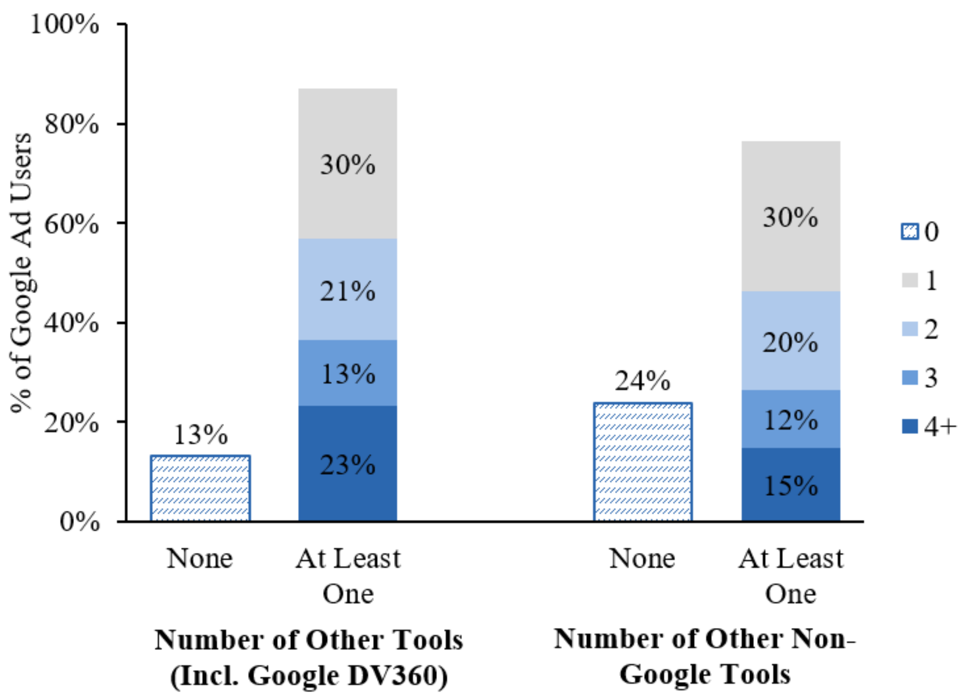
[118] *See, e.g.*, Shlomo Benartzi and Richard H. Thaler (2001), "Naive Diversification Strategies in Defined Contribution Saving Plans," *American Economic Review*, Vol. 91, No. 1, pp. 79-98; Daniel Read, George Loewenstein, and Matthew Rabin (1999), "Choice Bracketing," *Journal of Risk & Uncertainty*, Vol. 19, No. 1-3, pp. 171-197.

[119] Appendix J, at Exhibit 21.

[120] Appendix J, at Exhibit 21.

one other non-Google ad buying tool for programmatic display.[121,122] Excluding respondents who selected one or more decoy response options from the analysis, approximately 87 percent of respondents who use Google Ads indicated using at least one other ad buying tool for programmatic display and 75 percent of respondents who use Google Ads indicated using at least one other non-Google ad buying tool for programmatic display.[123]

Figure 15. Share of Google Ads Users Using Other Ad Buying Tools Among Higher-Spend Advertisers



Notes and Sources: Exhibit 23. Values sum to 100%. Displayed values are rounded to the nearest percent and may appear to sum to greater or less than 100 percent after rounding.

99. Figure 16 shows that, for the full analytical sample, approximately 93 percent of respondents who use Google DV360 indicated using at least one other ad buying tool for

121 Exhibit 23. As noted above, the decoy ad buying tools were not included in the count of ad buying tools used by each respondent.

122 As shown in Exhibits 25 to 27, most respondents who use only Google Ads for programmatic display advertising also use other types of digital advertising (including social, search, and/or email, among others), and spend less than 40 percent of their overall advertising budget on programmatic display advertising.

123 Appendix J, at Exhibit 23.

programmatic display and 77 percent of respondents who use Google DV360 indicated using at least one other non-Google ad buying tool for programmatic display.[124] Excluding respondents who selected one or more decoy response options from the analysis, approximately 92 percent of respondents who use Google DV360 indicated using at least one other ad buying tool for programmatic display and 75 percent of respondents who use Google DV360 indicated using at least one other non-Google ad buying tool for programmatic display.[125]

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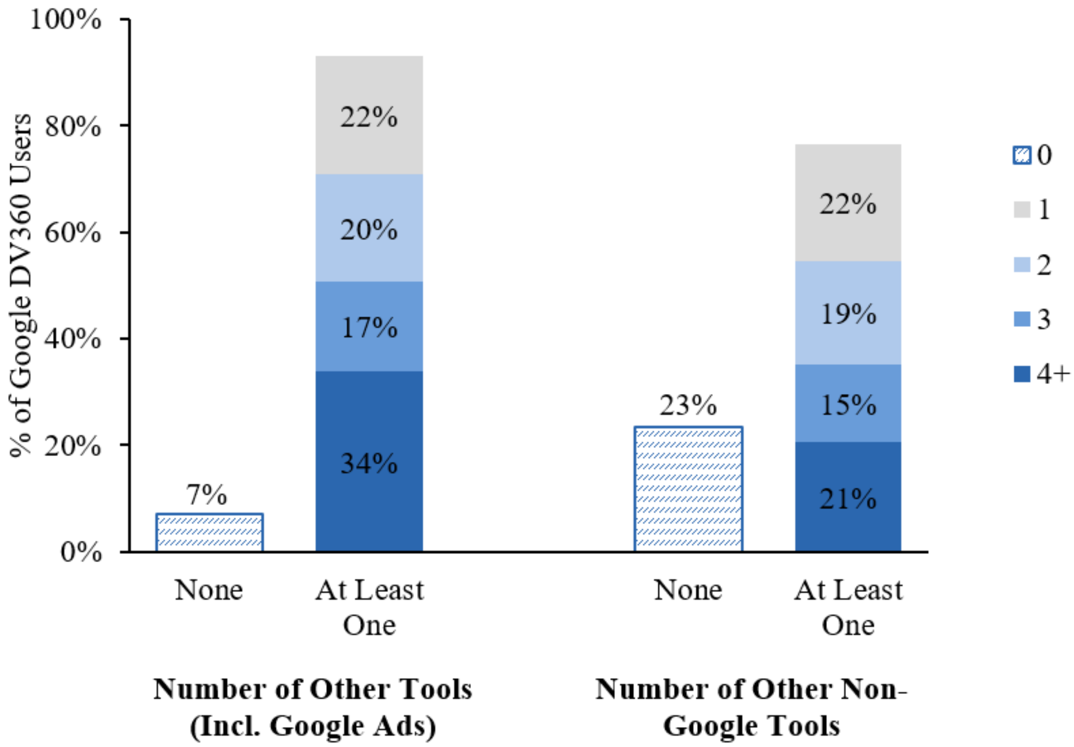
[124] Exhibit 23. As noted above, the decoy ad buying tools were not included in the count of ad buying tools used by each respondent.

[125] Appendix J, at Exhibit 23.

Figure 16. Share of Google DV360 Users Using Other Ad Buying Tools Among Higher-Spend Advertisers



Notes and Sources: Exhibit 23. Values sum to 100%. Displayed values are rounded to the nearest percent and may appear to sum to greater or less than 100 percent after rounding.

100. All respondents were asked whether they expected to use the same number, more, or fewer ad buying tools for programmatic display advertising next year. Approximately 56 percent of respondents indicated that they expect to use the same number of ad buying tools for programmatic display next year, approximately 24 percent indicated that they expected to use more ad buying tools for programmatic display, and 17 percent indicated that they expected to use fewer ad buying tools for programmatic display.[126] When asked to explain (in an open-ended response) why they expected to use more ad buying tools next year, some respondents mentioned reasons relating to performance optimization (*e.g.*, Respondent 2880: “We are constantly seeking to

[126] Exhibit 28.

improve our results"; Respondent 1397: "The returns and results we've seen have been positive so we expect to increase our investment in the future."), business growth (*e.g.*, Respondent 4513: "Business is growing"), and wanting to continue testing different vendors (*e.g.*, Respondent 1454: "We just expect to continue to testing."; Respondent 4487: "Experimentation to assess new Ad Buying Tools' Performance (Both Quality and ROAS)"), among other reasons.[127] Respondents who indicated that they expect to use fewer ad buying tools next year mentioned a variety of different reasons, including wanting to consolidate or simplify their processes (*e.g.*, Respondent 1327: "consolidate for efficiency"; Respondent 1605: "Streamlining costs and operations as much as possible.") and focusing on platforms that had better performance (*e.g.*, Respondent 1090: "We have been testing a lot of tools and now we need to filter the best ones so we can relocate our budget"; Respondent 3274: "We have been comparing efficacy, and plan to reallocate resources to the most beneficial tools."), among other reasons.[128]

101. All respondents were asked in Q12 to identify, from a closed-ended list of options, which factors they consider when deciding to use a particular ad buying tool for programmatic display advertising. The most popular responses were "Ad placement effectiveness" (48 percent of respondents), "Targeting criteria and capabilities" (47 percent of respondents), "Audience scale / reach" (45 percent of respondents), "Media optimization of placements during a campaign" (45 percent of respondents), and "Cost" (44 percent of respondents).[129]

102. Respondents were also asked about their past decisions to start and/or stop using certain buying tools. Approximately 40 percent of respondents indicated that they started using at least one ad buying tool for programmatic display in the past year.[130] In explaining this decision,

[127] Appendix F.3.
[128] Appendix F.3.
[129] Exhibit 29.
[130] Exhibit 31.

some respondents pointed to reasons relating to performance optimization (*e.g.*, Respondent 2889: "More affordable rates and ROI"; Respondent 1426: "Performance") and specific features of the tool (*e.g.*, Respondent 4513: "We needed more features": Respondent 4210: "Each tool may provide unique data insights and reporting capabilities."), among other reasons.[131] Approximately 23 percent of respondents indicated that they stopped using at least one ad buying tool for programmatic display in the past year.[132] When asked to explain why, several respondents mentioned reasons relating to poor performance (*e.g.*, Respondent 1341: "The ROI was horrible"; Respondent 2647: "Did not meet our ROAS goals after 1 month pilot"; Respondent 2893: "Because of low performance"; Respondent 3274: "Cost vs effectiveness- we felt our resources were better allocated elsewhere.") or high costs (Respondent 3652: "Higher cost"; Respondent 4214: "Cost fluctuations"; Respondent 1330: "…Pricing was not competitive").[133]

Assessment of Programmatic Display Ad Performance

103. As summarized in Figure 17, in Q17, the most popular metrics used to assess the performance of programmatic display ads were "Conversions" (48 percent of respondents), "Return on Investment (ROI)" (48 percent of respondents), "Return on Ad Spend (ROAS)" (47 percent of respondents), and "Cost per Click (CPC)" (47 percent of respondents).[134]

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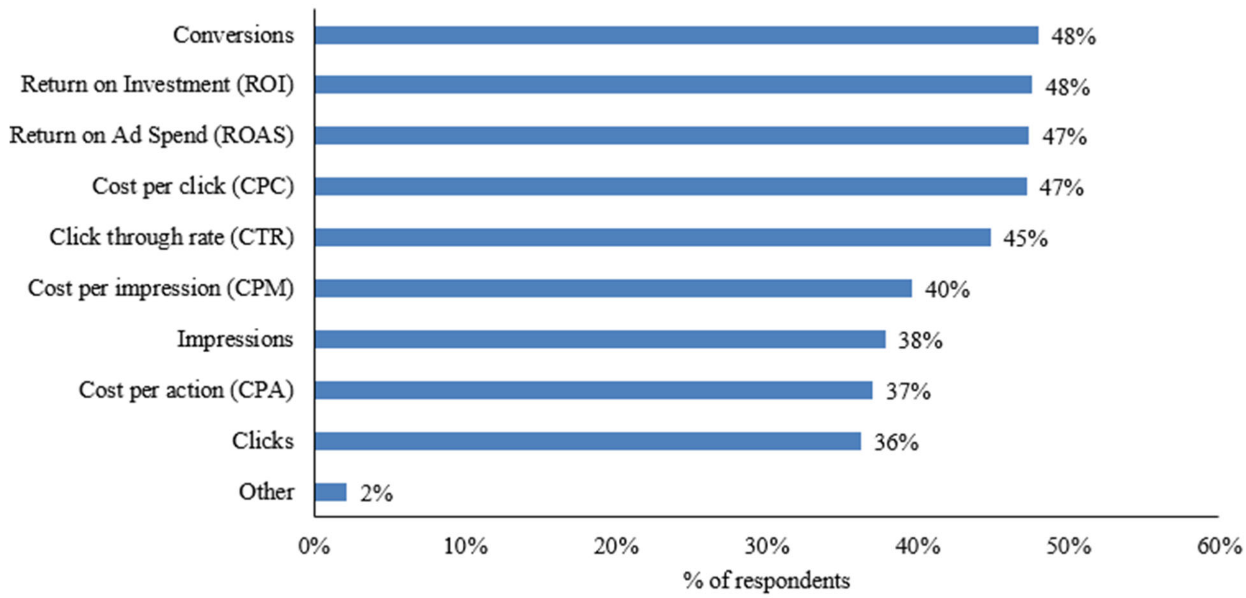
[131] Appendix F.3.
[132] Exhibit 30.
[133] Appendix F.3.
[134] Exhibit 32.

Figure 17. Share of Higher-Spend Advertisers Using Each Performance Metric



Notes and Sources: Exhibit 32.

104. Approximately 22 percent of respondents indicated that Return on Investment (ROI) was the most important metric for accurately assessing performance and approximately 17 percent of respondents indicated that Return on Ad Spend (ROAS) was most important.[135] As shown in Figure 18, Return on Investment (ROI) and Return on Ad Spend (ROAS) were ranked as the most important metric by a greater share of respondents than any other metric.[136]

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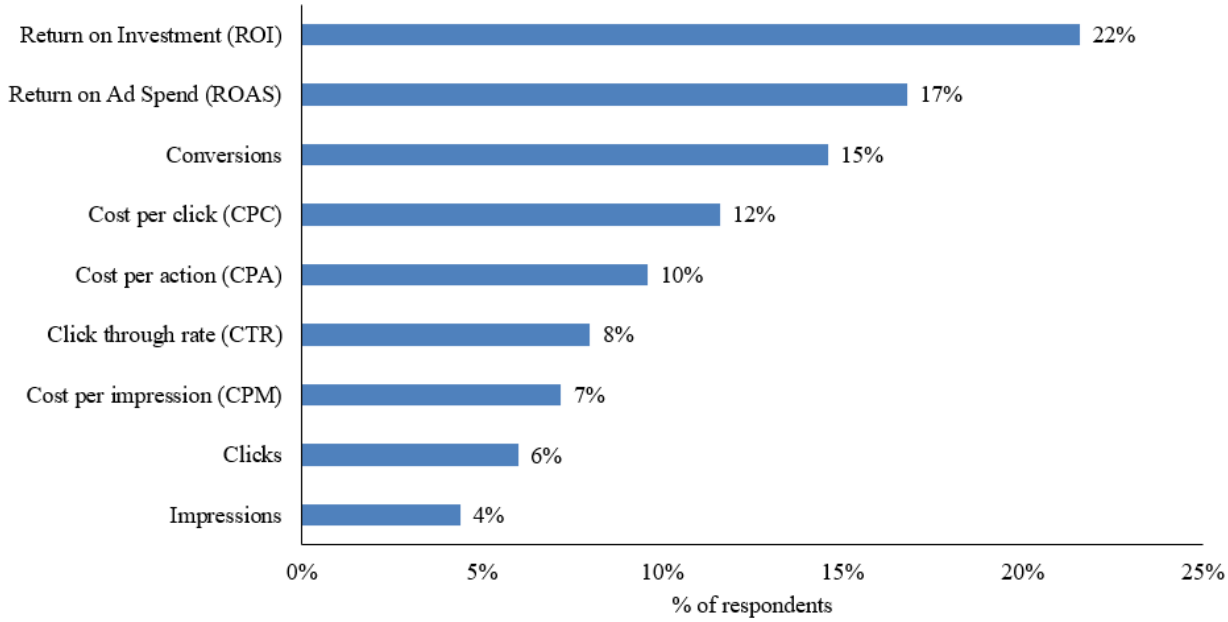
[135] Exhibit 33.
[136] Exhibit 33.

Figure 18. Share of Higher-Spend Advertisers Ranking Performance Metric as Most Important



Notes and Sources: Exhibit 33. One respondent (less than 1 percent of respondents) selected "Other" as the most important metric. Values sum to 100%. Displayed values are rounded to the nearest percent and may appear to sum to greater or less than 100 percent after rounding.

105. Approximately 77 percent of respondents indicated that they measure or assess performance of programmatic display advertising at least monthly.[137]

106. Approximately 59 percent of respondents ran experiments on their programmatic display ads in the past year.[138] Among those respondents, approximately 59 percent ran experiments related to creatives, 54 percent ran experiments related to audiences, and 50 percent ran experiments related to ROI/ROAS.[139]

D. Key Implications of the Findings

107. Performance measurement: The results of the survey show that higher-spend advertisers typically rely on a variety of methods to monitor the performance of their advertising;

[137] Exhibit 34. Specifically, approximately 12 percent of respondents indicated measuring performance daily, 37 percent indicated measuring performance weekly, and 28 percent indicated measuring performance monthly.
[138] Exhibit 35.
[139] Exhibit 36.

they also tend to review performance often. Approximately half of the advertisers reported monitoring Return on Investment (ROI) and/or Return on Ad Spend (ROAS), among other measures, for programmatic display advertising and other types of digital advertising. Based on these and other measures, advertisers can assess the relative effectiveness or ineffectiveness of the various advertising tools they use, including programmatic display, and potentially react to performance changes.

108. Substitution: Using the performance feedback that they receive regarding costs and returns, advertisers can adjust their advertising spending allocation. To further examine the actions taken (or not taken) as a result of identifying a cost increase, respondents were presented with a hypothetical scenario involving a "small but significant" increase in the cost of programmatic display advertising, assuming that the costs associated with other digital advertising types remain the same. The results indicated that most higher-spend advertisers (59 percent) would have diverted spending to other advertising types, including social, search, and digital video. Thus, while there are of course differences among advertisers, by and large, the findings indicate that at least social, search, and digital video serve as substitutes for programmatic display advertising. In particular, the findings indicate that many advertisers would reallocate advertising spending if they determine, based on the performance information available to them, that their programmatic display advertising is less cost effective than it previously was. In other words, these findings suggest that if the cost of programmatic display advertising increases, many advertisers will take action as a result, and the parties responsible for such cost increases will likely lose share to other advertising channels.

109. Multi-homing: The survey results also show that most higher-spend advertisers use multiple digital advertising types and, within programmatic display advertising specifically,

employ multiple ad buying tools. In particular, the survey results indicate that most advertisers used multiple other types of digital advertising in addition to programmatic display, with the most popular types being social, search, digital video, email, and direct deals display. In addition, the survey results show that most higher-spend advertisers (approximately 75 percent) used multiple ad buying tools for programmatic display advertising.[140] The survey results also indicate that multi-homing is common for users of Google ad buying tools. Specifically, approximately 87 percent of Google Ads users use at least one other ad buying tool for programmatic display.[141]

110. Thus, the survey findings indicate that most higher-spend advertisers use a variety of other digital advertising types and employ multiple ad buying tools for display advertising, suggesting they have a variety of alternatives to Google ad buying tools. That is, higher-spend advertisers, by and large, already practice multi-homing, which facilitates flexible allocations and tool selection as desired.

111. Programmatic display spending: It is also important to put spending on programmatic display in the broader context of advertising spending. As the survey results showed, programmatic display accounts for a relatively small portion of most higher-spend advertisers' digital advertising spending. Specifically, the survey results indicate that, among higher-spend advertisers who use programmatic display advertising, programmatic display accounts for an average share of approximately 29 percent and a median share of approximately 15 percent of their overall digital advertising budget.[142]

112. Sophistication of higher-spend advertisers: The survey also informs us about the level of sophistication of most higher-spend advertisers. For example, beyond the various metrics

140 Exhibit 21.
141 Exhibit 23. Approximately 76 percent of Google Ads users use at least one non-Google ad buying tool for programmatic display. Exhibit 23.
142 Exhibit 14.

they use to track the performance of their advertising spending and make corresponding adjustments, most higher-spend advertisers conduct experiments. Such experiments allow them to examine the effectiveness of advertising aspects such as the creatives, audiences, ROI/ROAS, bid strategies, and ad buying tool performance to further optimize their spending.

V. LOWER-SPEND ADVERTISER SURVEY

A. Overview

113. The Lower-Spend Advertiser Survey was similar for the most part to the Higher-Spend Advertiser Survey. As described in further detail below, I made certain modifications necessary to ensure the questionnaire was clear and appropriate for advertisers who spend significantly less on advertising and may not be familiar with industry-specific terminology or advertising practices that are more complex.[143]

114. The preliminary interviews suggested that lower-spend advertisers might not regularly differentiate between programmatic and direct deals transaction methods or use the term "ad buying tool," even if they had used display advertising. As a result, I removed references to programmatic and direct deals methods, instead asking about display advertising in general. Similarly, I removed questions about ad buying tools in the main questionnaire and adapted the questions to refer broadly to "platforms." In order to avoid presenting lower-spend advertisers with too many likely unfamiliar tool options (*i.e.*, the least used tools), I shortened the list of ad buying tools presented to respondents in questions regarding ad buying tool usage. In addition, in order to avoid overloading lower-spend advertisers, I asked respondents to identify the metrics used to measure ad performance for up to two advertising types, social media and display

[143] Of course, respondents in all three surveys always had the option to indicate "Don't know / Unsure" if they were unfamiliar with the language in the questions or answer options.

advertising, instead of up to four advertising types as was done in the Higher-Spend Advertiser Survey. Other differences involved minor updates to the phrasing of questions and answer options to make them suitable for lower-spend advertisers, such as removing references to "business unit/team" and updating "advertiser/marketer" to "products/services business."

B. Methodology

115. Three pre-test interviews (as described above) for the Lower-Spend Advertiser Survey were conducted on September 19, 2023. No changes were made based on these pre-test interviews. The Lower-Spend Advertiser Survey was administered from September 25, 2023 to October 12, 2023. The full survey questionnaire is included in Appendix G.1. Screenshots of the survey as it appeared to respondents are presented in Appendix G.2.

1. Survey Universe and Screening Criteria

116. The survey universe for the Lower-Spend Advertiser Survey was similar to that of the Higher-Spend Advertiser Survey. Specifically, the universe for the Lower-Spend Advertiser survey included advertisers and marketers based in the U.S. who work for companies that sell and advertise products or services (as opposed to ad agencies) and have spent less than $500,000 on advertising in the past year.[144] Because a primary focus of the survey was to assess decision-making regarding display advertising specifically, the survey universe was limited to advertisers and marketers who have used display advertising in the past year and who were personally involved in decisions regarding their company's use of display advertising, including determining strategies, budgets, use of buying tools, and/or management of digital display campaigns.

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[144] As discussed above, advertisers spending more than $500,000 on advertising in the past year were eligible for the Higher-Spend Advertiser Survey, which used certain industry terms that higher-spend advertisers tend to be more familiar with.

117. The screening questions used to determine whether the respondents met the definition of the relevant survey universe and thus would qualify for the main questionnaire for the Lower-Spend Advertiser Survey were similar to those used in the Higher-Spend Advertiser Survey, except for certain differences that I describe below.

118. Similar to the Higher-Spend Advertiser Survey, respondents in the Lower-Spend Advertiser Survey were asked to identify what type of company they work for (QS7), and had to indicate they work for a company that sells and advertises products or services in order to proceed with the survey. However, I replaced the term "Advertiser/Marketer" with "Products/Services Business" to account for respondents working for small businesses whose primary function is not marketing or advertising:[145]

> **QS7.** Which of the following best characterizes the type of company you work for? *(Please select only one option.)*
>
> - ⊙ **Products/Services Business** – your company sells products or services and advertises/markets its products or services
> - ⊙ **Creative Agency** – your company designs or produces marketing content and/or advises clients on their creative media/marketing strategies
> - ⊙ **Media Agency** – your company advises clients on their media/marketing strategies and/or how to spend their advertising funds
> - ⊙ **Full Service Agency** – your company handles both Creative and Media strategy and/or execution
> - ⊙ **Other** (*please describe*): **[INSERT TEXT BOX]**
>
> **[TERMINATE IF "Products/Services Business" IS NOT SELECTED]**

119. Respondents were then asked about their advertising spending over the last 12 months (QS10). Qualified respondents had to indicate their company had spent less than $500,000 on all advertising in the last 12 months. To allow for a more granular assessment of spending, I

[145] The order of the presented response options was randomized (except for "Other").

separated the "$10,000 to less than $50,000" into two categories, "$10,000 to less than $25,000" and "$25,000 to less than $50,000:"[146]

> **QS10.** Approximately how much did your company spend in the last 12 months on all advertising, including all digital types (e.g., display, video, audio, social) plus all nondigital types (e.g., TV types, print, OOH, etc.)? *(Please select only one option.)*
>
> - ⦿ Less than $10,000
> - ⦿ $10,000 to less than $25,000
> - ⦿ $25,000 to less than $50,000
> - ⦿ $50,000 to less than $100,000
> - ⦿ $100,000 to less than $250,000
> - ⦿ $250,000 to less than $500,000
> - ⦿ $500,000 to less than $1 million **[TERMINATE]**
> - ⦿ $1 million to less than $3 million **[TERMINATE]**
> - ⦿ $3 million to less than $7 million **[TERMINATE]**
> - ⦿ $7 million to less than $15 million **[TERMINATE]**
> - ⦿ $15 million to less than $30 million **[TERMINATE]**
> - ⦿ $30 million to less than $50 million **[TERMINATE]**
> - ⦿ $50 million to less than $100 million **[TERMINATE]**
> - ⦿ $100 million to less than $250 million **[TERMINATE]**
> - ⦿ $250 million to less than $500 million **[TERMINATE]**
> - ⦿ $500 million or more **[TERMINATE]**
> - ⦿ Don't know / Unsure **[TERMINATE]**

120. As described above, respondents for the Lower-Spend Advertiser Survey had to indicate that they use display advertising (QS12), but the survey did not distinguish between programmatic transaction methods and direct deals.[147]

121. Similar to the Higher-Spend Advertiser Survey, respondents had to indicate that they have been personally involved in their company's digital display advertising efforts in the last 12 months to be qualified to participate in the survey (QS13). However, I made minor adjustments

[146] The order of the presented response options was rotated (except for "Don't know / Unsure").
[147] *See* Appendix G.1, at QS12.

to the language in the response options related to personal involvement in advertising efforts to align with the scope of advertising that lower-spend advertisers likely perform: [148]

> **QS13.** In which of the following ways have you personally been involved in your company's **digital display** advertising efforts in the **last 12 months**? *(Select all that apply.)*
>
> - ❒ I determine overall strategies and/or budgets for digital display
> - ❒ I determine which tools and/or platforms to use for digital display
> - ❒ I regularly use self-serve ad platforms to manage digital display campaigns
> - ❒ I oversee a team/individuals that use(s) self-serve ad platforms to manage digital display campaigns
> - ❒ I regularly set up audience/target parameters for digital display campaigns
> - ❒ I measure results of digital display campaigns
> - ⦿ None of the above **[EXCLUSIVE]**
> - ⦿ Don't know / Unsure **[EXCLUSIVE]**
>
> **[TERMINATE IF NONE OF "**I determine overall strategies and/or budgets for digital display**", "**I determine which tools and/or platforms to use for digital display**", "**I regularly manage digital display campaigns**", AND "**I oversee a team/individuals that use(s) self-serve ad platforms to manage digital display campaigns**" ARE SELECTED]**

122. Similar to the Higher-Spend Advertiser Survey, respondents were also asked a series of questions regarding their current job title or level and market sector. The information gathered from these questions was used for data analysis purposes and not for screening purposes.

123. Consistent with the definition of the survey universe, the survey sample thus included respondents who work for companies that sell and advertise their products or services, had spent less than $500,000 on all advertising in the past year, had spent some of their advertising budget on digital advertising in the past year, and had used display advertising in the past year. Additionally, respondents must have been personally involved in determining strategies, budgets,

148 The order of the presented response options was rotated (except for "None of the above" and "Don't know / Unsure").

or advertising tools and platforms for digital display or using self-serve ad platforms to manage digital display campaigns.

2. Main Questionnaire

124. After passing the screening questions, qualified respondents entered the main questionnaire and were given the same standard introductory instructions (Q1) as in the Higher-Spend Advertiser Survey. As noted above, the main questionnaire was broadly similar to the Higher-Spend Advertiser Survey, except for certain differences that I describe below. The main questionnaire included questions that addressed the following topics:

- use of different digital advertising types and ad agencies;
- reactions to a hypothetical increase in the cost of display advertising;
- use of platforms for display advertising; and
- methods to assess the performance of display advertising.

Questions Regarding Use of Digital Advertising Platforms and Ad Agencies

125. Similar to the Higher-Spend Advertiser Survey, the Lower-Spend Advertiser Survey asked respondents whether they use an ad agency and/or consultant for digital advertising and, if so, for what purposes (Q2 and Q3). They were then asked a series of questions related to their use of digital advertising. To ensure a consistent understanding of digital display advertising across respondents, they were first shown the same description of digital display advertising that had been shown previously in the screener. They were then asked which platforms they had used for digital display advertising in the last 12 months. Respondents were provided with a shorter list of platforms selected from the list of buying tools in the Higher-Spend Advertiser Survey,[149] as

[149] The list of ad buying tools was, in part, based on GOOG-DOJ-AT-02524665-749, at 679-681 (which identified Google Display and Video 360, AcuityAds, Adelphic, Adform, Amazon DSP, Adobe Advertising Cloud, Amobee, Basis by Centro, Beeswax, Criteo, and MediaMath DSP, among others).

well as options for "Other" (which allowed respondents to type in the name of a platform not listed) and "Don't know / Unsure." As in the Higher-Spend Advertiser Survey, I included a fictional platform that respondents could not have used ("Ad Step Technologies") as a "decoy" or "control" name to assess the amount of "false recognition" in the survey results, which may reflect, for example, misremembering or inattention.

> **Q4.** You mentioned that you have used **digital display advertising** in the **last 12 months.**
>
> **Digital display ads** are digital ads made up of text, image, video and/or other multimedia components that typically appear along the top or sides of a website, or sometimes in the middle of other content on a website. Examples of display ad formats include banner ads, animations, and interactive content. Display ads do not include ads placed on social media platforms.[150]
>
> Which of the following platforms, if any, have you used during the **last 12 months** for **digital display advertising**? *(Please select all that apply.)*[151]
>
> ❒ Google Ads
> ❒ Google Display and Video 360 (DV360)
> ❒ Adobe Advertising Cloud
> ❒ Amazon DSP
> ❒ Amobee
> ❒ MediaMath
> ❒ Quantcast
> ❒ The Trade Desk
> ❒ Yahoo DSP (formerly Verizon Media)[152]
> ❒ Criteo
> ❒ Ad Step Technologies
> ❒ Other (*please specify*): **[TEXT BOX]**
> ⊙ Don't know / Unsure **[EXCLUSIVE]**

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150 As described in paragraph 52, this definition was created for purposes of these surveys only, in order to test—among other things—the degree to which advertisers viewed certain types of ads, including ads shown on social media platforms, as substitutes for other types of display ads. I did not conduct a survey to determine how advertisers use the terms "display" or "social."

151 The order of the response options was randomized (except for "Other" and "Don't know / Unsure").

152 In September 2021, Verizon Media DSP was renamed Yahoo DSP as part of its acquisition by private equity firm Apollo Global Management from Verizon. *See* https://support.tapclicks.com/hc/en-us/articles/4402116928795-Yahoo-DSP-Support-Guide (viewed 9/27/2023); https://www.theverge.com/2021/9/2/22653652/yahoo-aol-acquired-apollo-global-management-private-equity (viewed 9/27/2023).

126. If respondents indicated that they had used social advertising in the last 12 months in the screener, they were then asked to select the platforms they had used for social advertising. I also included a description of social advertising again to ensure their understanding was consistent across the sample. Similar to the previous question, I included a fictional social platform that respondents could not have used ("FriendLinx") as a "decoy" or "control" name.

> **Q5. [IF "SOCIAL" WAS SELECTED IN QS12]** You indicated that you have used **social advertising** in the **last 12 months**.
>
> **Social ads** are digital ads placed on social media platforms such as Facebook, Instagram, LinkedIn, Snapchat, and Twitter.
>
> Which of the following platforms, if any, have you used during the **last 12 months** for **social advertising**? *(Please select all that apply.)* [153]
>
> - ❒ Facebook
> - ❒ Instagram
> - ❒ Pinterest
> - ❒ Snapchat
> - ❒ TikTok
> - ❒ Twitter
> - ❒ LinkedIn
> - ❒ Reddit
> - ❒ Tumblr
> - ❒ FriendLinx
> - ❒ Other social media platforms: **[INSERT TEXT BOX]**
> - ⦿ Don't know / Unsure **[EXCLUSIVE]**

127. Next, respondents were asked an open-ended question regarding the factors they consider when deciding from where to buy digital ads. They were given the option to select "Don't know / Unsure." If respondents did not select the "Don't know / Unsure" option, they were asked an additional question to ensure that they were being thoughtful about their answers:

> **Q6.** What factors do you consider when deciding where to buy **digital ads** from? *(Please type your response in the text box below, or select "Don't know / Unsure")*

[153] The order of the response options was randomized (except for "Other social media platforms" and "Don't know / Unsure").

> **Q7. [IF "DON'T KNOW / UNSURE" WAS NOT SELECTED]** In addition to the factors you just mentioned, what other factors, if any, do you consider when deciding where to buy **digital ads** from? *(Please type your response in the text box below, or select "Don't know / Unsure")*

128. Respondents were then presented with a list of digital advertising types they had previously indicated using in the past year in the screening questions. They were asked to allocate 100% of their digital advertising budget across the different types of digital advertising. Specifically, they received the following instructions:[154]

> **Q8.** The following questions pertain to **digital advertising**.
>
> Previously, you mentioned that you have used the following types of **digital advertising** in the past year. What is your best estimate of the share of your **digital advertising spending** that was used for each of these types of advertising in the past year? Specifically, please allocate 100% across the different types of digital advertising shown below based on the share of your total digital advertising spending on each type. The total should add up to 100%.
>
> To review the advertising type descriptions, hover your mouse over each digital advertising type.
>
> *(Please enter a number from 0 to 100 in each cell, or select "Don't know / Unsure." Please make sure that numbers add up to 100.)*
>
> Search: [ ]
> Display: [ ]
> Email: [ ]
> Digital Audio: [ ]
> Social: [ ]
> App/In-App: [ ]
> Digital Video: [ ]
> Connected TV: [ ]
> eCommerce Platforms: [ ]
> Other: [ ]
> ⊙ Don't know / Unsure **[EXCLUSIVE]**

[154] The order of the presented response options was randomized (except for "Other" and "Don't know / Unsure").

Questions Regarding Responses to an Increase in the Cost of Display Advertising

129. Similar to the Higher-Spend Advertiser Survey, I instructed respondents in the Lower-Spend Advertiser Survey to assume a scenario in which their analysis shows that the cost of display advertising has increased by a "small but significant amount," whereas the costs of other digital advertising types have not changed. They were then asked whether or not they would divert some of their spending to other types of digital advertising (Q9) and if so, to which types they would divert (Q10) and the extent to which they would divert (Q11). As I described above, all references to "programmatic display" or "direct deals display" were replaced with "display."

Questions Regarding the Assessment of Display Ad Performance

130. Similar to the Higher-Spend Advertiser Survey, respondents were asked about the metrics they use to assess the performance of display ads. However, instead of asking respondents to indicate which performance metrics they used for each of programmatic display ads, direct deals display ads, social media ads, and digital video ads, I only asked respondents about display ads and social media ads, if they indicated using social media ads in the screener.

> **Q12.** Which of the following metrics, if any, are you using to assess the performance of **display ads** and/or **social media ads**?
>
> To review the advertising type descriptions, hover your mouse over each digital advertising type.[155]
> *(Please select all that apply in each column.)*

Metric	Display ads	Social media ads
Impressions	❒	❒
Clicks	❒	❒
Conversions	❒	❒
Cost per impression (CPM)	❒	❒
Cost per click (CPC)	❒	❒
Cost per action (CPA)	❒	❒
Return on Ad Spend (ROAS)	❒	❒

[155] The orders of the columns and rows were randomized (except for "Other," "None of the above," and "Don't know / Unsure").

Return on Investment (ROI)	❒	❒
Click through rate (CTR)	❒	❒
Other (please specify): **[TEXT BOX]**	❒	❒
None of the above **[EXCLUSIVE]**	⦿	⦿
Don't know / Unsure **[EXCLUSIVE]**	⦿	⦿

131. As in the Higher-Spend Advertiser Survey, if respondents indicated they used more than one metric for display ads, they were then asked to rank the selected metrics in terms of their importance to assessing the performance of display ads (Q13). Similarly, respondents were asked to indicate the frequency at which they receive information on the performance of the display ads (Q14), whether they ran any experiments on their display ads in the past year (Q15), and, if applicable, what types of experiments they ran (Q16).

C. Survey Findings

132. In this section, I will summarize the main survey findings for the Lower-Spend Advertiser Survey. In each analysis, I summarize the results for the full sample of respondents, as well as for the subset of respondents who indicated spending less than $50,000 on advertising annually to explore whether there are meaningful differences for advertisers at even lower spending levels.[156] Additional findings can be found in Exhibits 37 to 67. The complete data set of all individual participants' responses is presented in Appendix G.3.

133. A total of 402 lower-spend respondents completed the survey.[157] Of those, 95 respondents chose to exclude their responses in QF1.[158] Consistent with common practice, 5 respondents who took too little time (less than 100 seconds) or took too much time (3 hours or

[156] As shown in Exhibit 42, the analytical sample included 138 respondents who spent less than $50,000 on advertising in the past year, which provided a sufficient sample size to perform these analyses.
[157] Exhibit 37.
[158] Exhibit 37. Respondents who selected "Exclude my responses" in QF1 were not included in the respondent-level data files provided to me by Advertiser Perceptions and thus I do not have access to their responses to other questions in the survey.

more) were removed from the sample.[159] A total of 302 respondents are included in the summary tables.[160]

134. In total, approximately 16 percent of respondents were women and 84 percent were men.[161] With respect to age, approximately 18 percent of respondents were between 18 and 34, 74 percent were between 35 and 49, and 8 percent were 50 years old or older.[162] Approximately 38 percent of respondents indicated that their current job title/level was best described as "C-Level (CEO, COO, CMO, etc.)," 22 percent selected "Director," 21 percent selected "Vice President, SVP, EVP, President, etc.," and 12 percent selected "Manager."[163] Approximately 46 percent of respondents spent less than $50,000 on advertising in the last 12 months, and 54 percent spent between $50,000 and $500,000 on advertising in the last 12 months.[164]

Use of Digital Advertising Types and Ad Agencies

135. As shown in Figure 19, in addition to display advertising,[165] approximately 86 percent of respondents used at least one other type of digital advertising. As shown, the results are similar for respondents with less than $50,000 annual ad spend.[166]

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159 Exhibit 37. Changing these cutoffs to, for example, three minutes and two hours does not meaningfully impact the results. *See* Exhibit 105.

160 Exhibit 37. As noted above, two survey questions included "decoy" response options: Q4 regarding the use of different ad buying tools (including "Ad Step Technologies" as a decoy response option) and Q5 regarding the use of different social media platforms (including "FriendLinx" as a decoy response option). Overall, approximately 20 percent of respondents selected at least one of the two decoy response options. *See* Appendix J, at Exhibit 37. Given that these selections might have been inadvertent, these respondents were not excluded from the analytical sample. In Appendix J, I present an alternative set of results for all questions based on an analytical sample that excludes respondents who selected one or more decoy response options in Q4 or Q5. As shown, excluding these respondents has virtually no effect on the results (and the difference is not statistically significant).

161 Exhibit 39.

162 Exhibit 39.

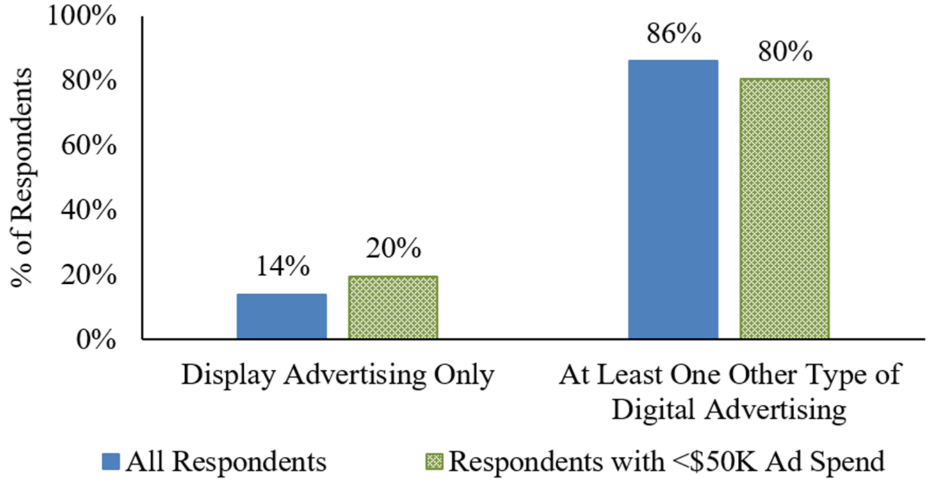
163 Exhibit 41.

164 Exhibit 42. Calculated as (6 + 58 + 74) / 302 = 45.7 percent; (42 + 61 + 61) / 302 = 54.3 percent.

165 As described in paragraph 52, the definitions of advertising types were created for purposes of these surveys only, in order to test—among other things—the degree to which advertisers viewed certain types of ads, including ads shown on social media platforms, as substitutes for other types of display ads. I did not conduct a survey to determine how advertisers use the terms "display" or "social."

166 Exhibit 45.

Figure 19. Share of Lower-Spend Advertisers Using More than One Type of Digital Advertising

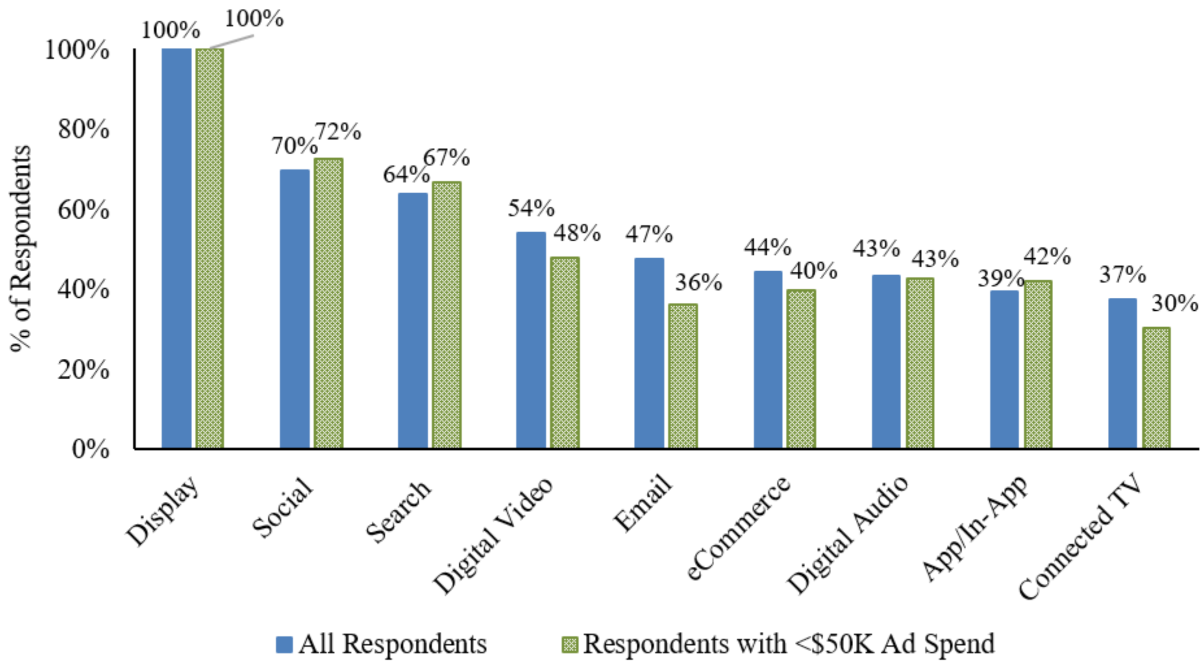


Notes and Sources: Exhibit 45.

136. As shown in Figure 20, the most popular other types of digital advertising were social advertising (70 percent of respondents), search advertising (64 percent of respondents), digital video advertising (54 percent of respondents), and email advertising (47 percent of respondents). Similarly, among respondents with less than $50,000 annual ad spend, the most popular other types of digital advertising were social advertising (72 percent of respondents), search advertising (67 percent of respondents), digital video advertising (48 percent of respondents), and digital audio advertising (43 percent of respondents).[167]

[167] Exhibit 44.

Figure 20. Share of Lower-Spend Advertisers Using Digital Advertising Types



Notes and Sources: Exhibit 44. All respondents must have used display advertising in the past year to qualify for survey participation. One respondent (less than 1 percent of respondents) selected "Other;" this respondent had an annual ad spend of $50,000 – $500,000.

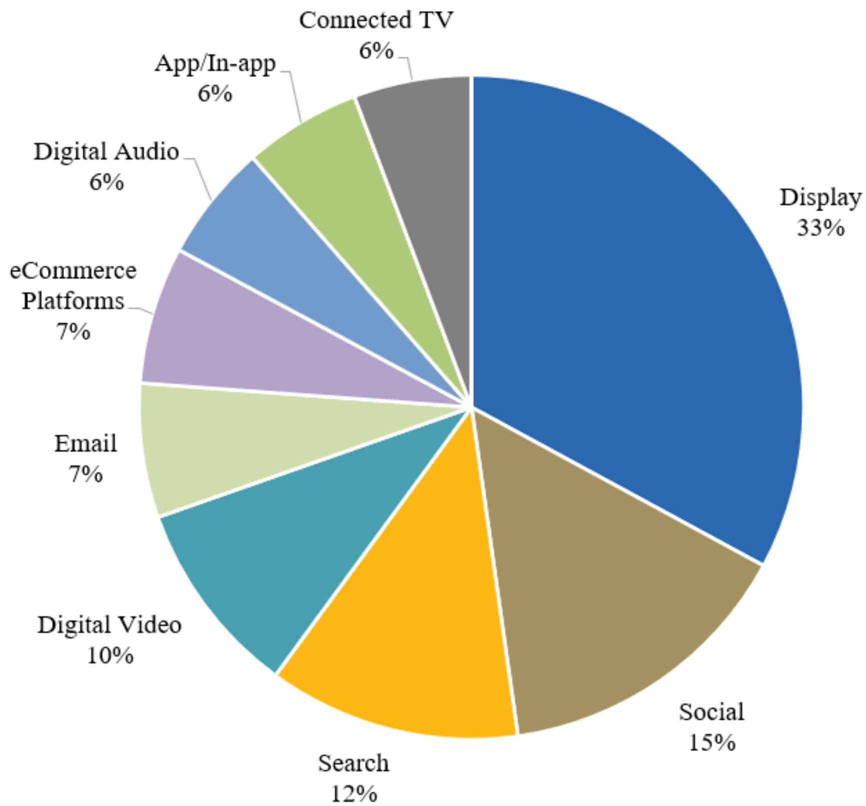
137. Among respondents who indicated that they used social advertising in the past year, approximately 83 percent used Facebook, 65 percent used Instagram, 48 percent used Twitter, 47 percent used LinkedIn, and 42 percent used TikTok.[168]

138. As illustrated in Figure 21A, across all respondents, display advertising accounted for an average of 33 percent of respondents' overall digital advertising budgets over the past year. As shown in Figure 21B, display advertising accounted for a similar percentage (37 percent) of the overall digital advertising budget for respondents with less than $50,000 annual ad spend.[169] As shown in Exhibit 57, display advertising accounted for a median of 20 percent of the overall digital advertising budget across the full sample of lower-spend advertisers and a median of 27

[168] Exhibit 56. As shown on Exhibit 56, the results are similar among respondents with less than $50,000 annual ad spend.
[169] Exhibit 57.

percent of the overall digital advertising budget among respondents with less than $50,000 annual ad spend.[170]

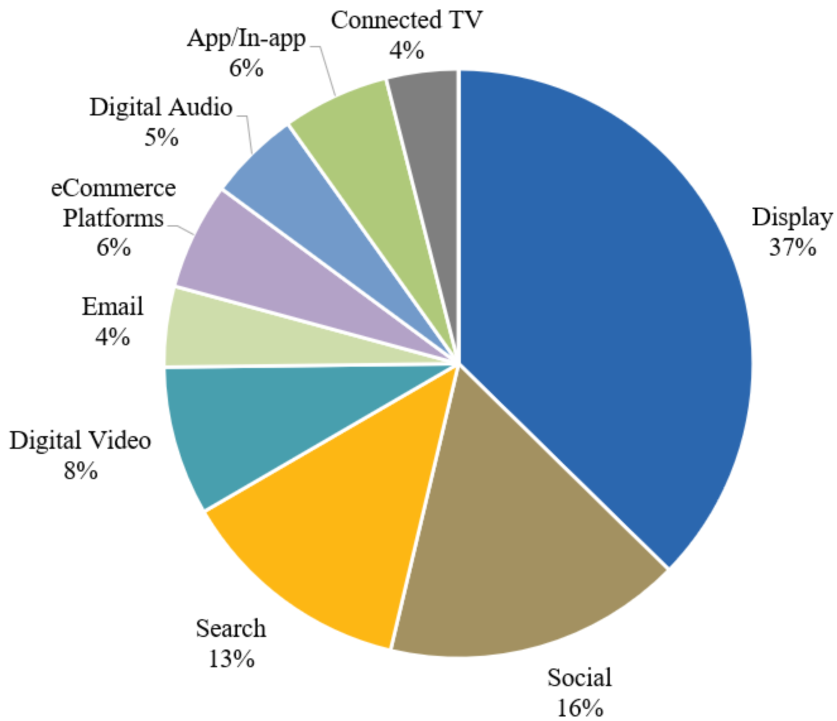
Figure 21A. Average Share of Budget Allocated to Each Advertising Type Among All Lower-Spend Advertisers



Notes and Sources: Exhibit 57. All respondents must have used display advertising in the past year to qualify for survey participation. Values sum to 100%. Displayed values are rounded to the nearest percent and may appear to sum to greater or less than 100 percent after rounding.

[170] Exhibit 57.

Figure 21B. Average Share of Budget Allocated to Each Advertising Type Among Lower-Spend Advertisers with Less than $50,000 Annual Ad Spend



Notes and Sources: Exhibit 57. All respondents must have used display advertising in the past year to qualify for survey participation. Values sum to 100%. Displayed values are rounded to the nearest percent and may appear to sum to greater or less than 100 percent after rounding.

139. Approximately 67 percent of respondents indicated that they use an ad agency and/or consultant for digital advertising.[171] The most common ways in which respondents use ad agencies and/or consultants include assistance with "Media/marketing strategies" (60 percent of respondents using ad agencies and/or consultants), "Implementation of advertising (*e.g.*, placing bids, interacting with DSPs)" (52 percent of respondents using ad agencies and/or consultants), "Tracking advertising performance" (52 percent of respondents using ad agencies and/or

[171] Exhibit 46. Similarly, approximately 69 percent of respondents with less than $50,000 annual ad spend indicated that they use an ad agency and/or consultant for digital advertising.

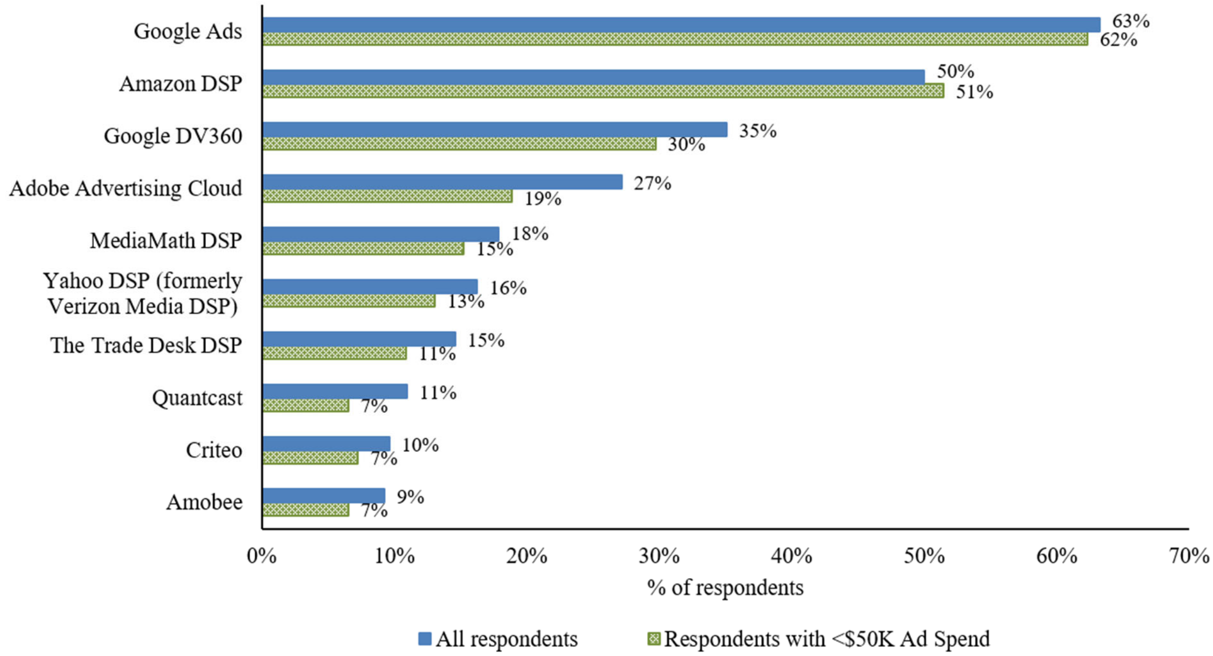
consultants), and "Content and/or creatives" (45 percent of respondents using ad agencies and/or consultants).[172]

Use of Platforms to Buy Display Ads

140. In response to Q4 regarding usage of different platforms to buy digital display ads, the most commonly used platforms were Google Ads (63 percent of respondents), Amazon DSP (50 percent of respondents), Google DV360 (35 percent of respondents), and Adobe Advertising Cloud (27 percent of respondents).[173] These results are illustrated in Figure 22 below. As shown, the results are similar for advertisers with less than $50,000 annual ad spend.

[172] Exhibit 47. Respondents with less than $50,000 annual ad spend indicated using ad agencies and/or consultants for similar purposes.
[173] Exhibit 48.

Figure 22. Share of Lower-Spend Advertisers Using Display Platforms (10 Most Popular Platforms)



Notes and Sources: Exhibit 48. Excludes "Ad Step Technologies."

141. As noted above, "Ad Step Technologies" was included as a decoy/control platform name in Q4. Approximately 14 percent of respondents indicated that they used Ad Step Technologies.[174] In addition, Q5 regarding social media platform usage included a decoy social media platform "FriendLinx," and approximately 12 percent of respondents selected this response option.[175] Overall, approximately 20 percent of respondents in the analytical sample selected at least one of the two decoy response options.[176] Among the subset of respondents with less than $50,000 in annual ad spend, approximately 15 percent of respondents selected at least one of the

174 Exhibit 48. Among the subset of respondents with less than $50,000 annual ad spend, approximately 7 percent indicated that they used Ad Step Technologies.

175 Exhibit 56. Among the subset of respondents with less than $50,000 annual ad spend, approximately 13 percent indicated that they used FriendLinx.

176 A total of 59 respondents selected at least one decoy response option (or approximately 20 percent of the overall analytical sample of 302 respondents). *See* Appendix J, at Exhibit 37.

two decoy response options.[177] In this section, I present certain results regarding use of multiple buying tools both including and excluding respondents who selected one or more decoy response options. As demonstrated below, the main results are very similar regardless of whether respondents who selected one or more decoy response options are included in or excluded from the analysis. Given that these selections might have been inadvertent, these respondents were not excluded from the analytical sample.[178]

142. Across the full analytical sample, approximately 80 percent of respondents indicated using more than one platform to buy display ads.[179] Respondents reported using an average of 2.6 platforms to buy display ads in the past year.[180] Among the subset of respondents with less than $50,000 in annual ad spend, approximately 78 percent of respondents indicated using more than one platform to buy display ads.[181] On average, respondents with less than $50,000 in annual ad spend reported using approximately 2.3 platforms to buy display ads in the past year.[182]

143. Excluding respondents who selected one or more decoy response options from the analysis, approximately 77 percent of respondents indicated using more than one platform to buy display ads.[183] Respondents reported using an average of 2.4 platforms to buy display ads.[184] For the subset of respondents with less than $50,000 in annual ad spend, excluding respondents who

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177 A total of 21 respondents with less than $50,000 in annual ad spend selected at least one decoy response option (or approximately 15 percent of the subset of respondents with less than $50,000 in annual ad spend). *See* Appendix J, at Exhibit 37.

178 An alternative set of results for all questions based on an analytical sample that excludes respondents who selected one or more decoy response options is in Appendix J.

179 Exhibit 49. The decoy display platform name was not included in the count of platforms used by each respondent. In other words, if a respondent indicated using Google DV360 and Ad Step Technologies, he or she was considered to use only one display platform (Google DV360).

180 Exhibit 49.

181 Exhibit 49.

182 Exhibit 49.

183 Appendix J, at Exhibit 49.

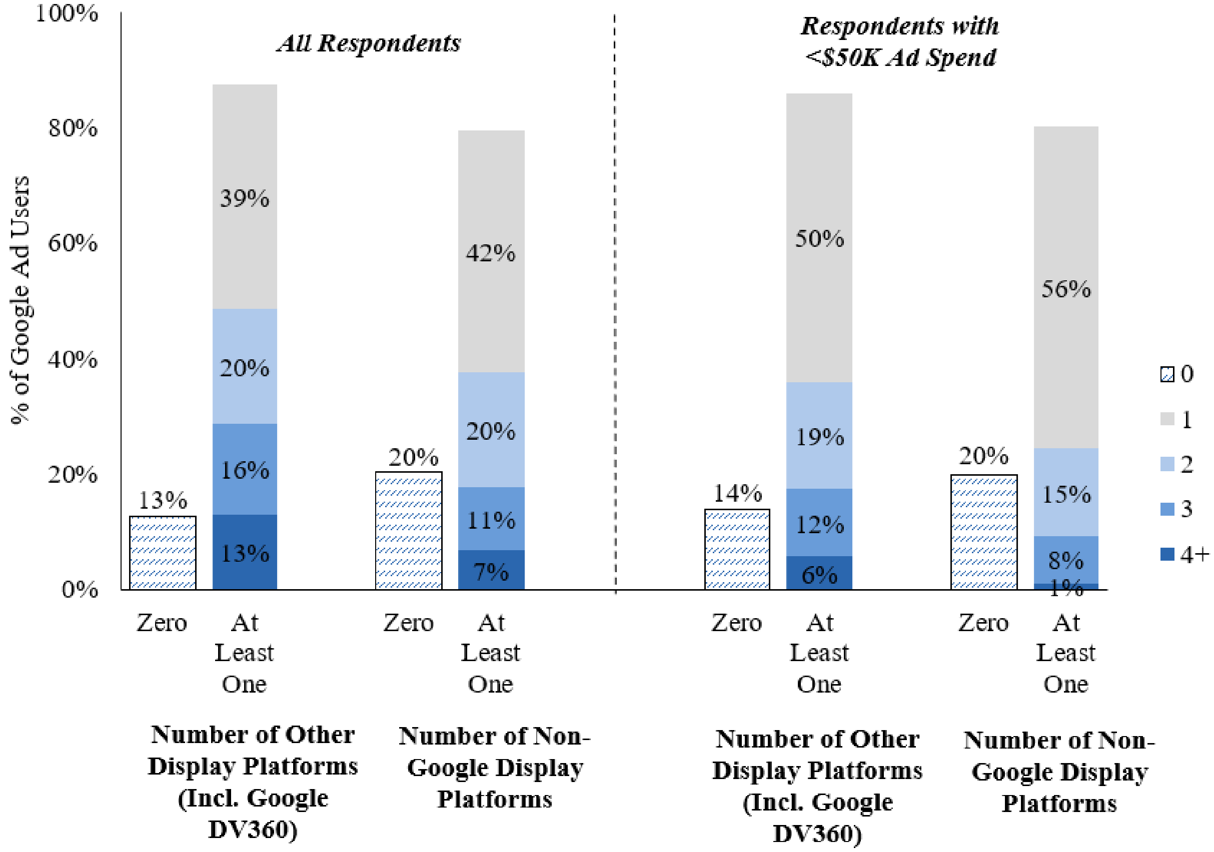
184 Appendix J, at Exhibit 49.

selected one or more decoy response options from the analysis, approximately 78 percent of respondents indicated using more than one platform to buy display ads.[185] Respondents in this subset reported using an average of 2.2 platforms to buy display ads.[186]

144. Users of Google Ads and Google DV360 also indicated using multiple platforms to buy display ads. As shown in Figure 23, for the full analytical sample, approximately 87 percent of respondents who use Google Ads indicated using at least one other platform to buy display ads and 80 percent of respondents who use Google Ads indicated using at least one other non-Google platform to buy display ads.[187,188] Figure 23 also shows that the results are similar for advertisers with less than $50,000 annual ad spend.

185 Appendix J, at Exhibit 49.
186 Appendix J, at Exhibit 49.
187 Exhibit 51. As noted above, the decoy display platform was not included in the count of platforms used to buy display ads by each respondent.
188 As shown in Exhibits 53 to 55, most respondents who use only Google Ads for display advertising also use other types of digital advertising (including social, search, and/or email, among others), and spend less than 40 percent of their overall advertising budget on display advertising.

Figure 23. Share of Google Ads Users Using Other Display Platforms Among Lower-Spend Advertisers



Notes and Sources: Exhibit 51. Values sum to 100%. Displayed values are rounded to the nearest percent and may appear to sum to greater or less than 100 percent after rounding.

145. Excluding respondents who selected one or more decoy response options from the analysis, approximately 85 percent of respondents who use Google Ads indicated using at least one other platform to buy display ads and 76 percent of respondents who use Google Ads indicated using at least one other non-Google platform to buy display ads.[189] For the subset of respondents with less than $50,000 in annual ad spend, excluding respondents who selected one or more decoy response options from the analysis, approximately 84 percent of respondents who use Google Ads

[189] Appendix J, at Exhibit 51.

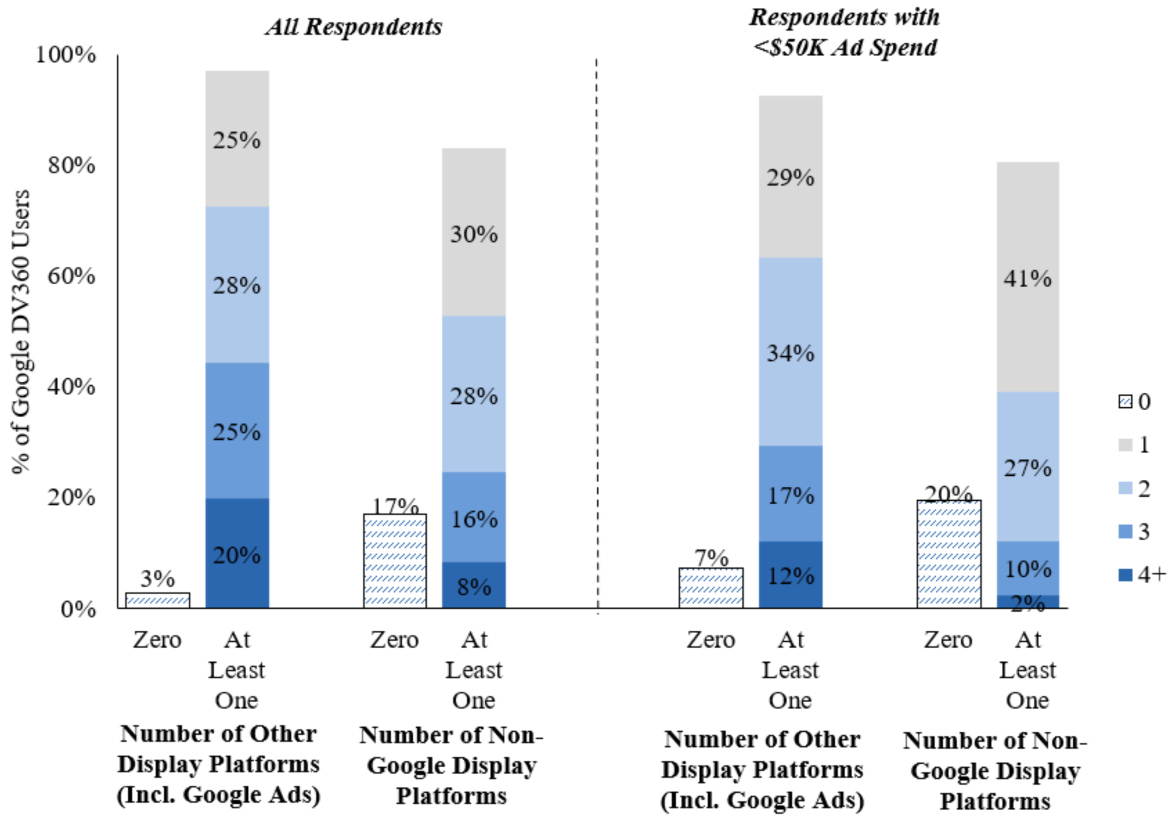
indicated using at least one other platform to buy display ads and 78 percent of respondents who use Google Ads indicated using at least one other non-Google platform to buy display ads.[190]

146. As shown in Figure 24, for the full analytical sample, approximately 97 percent of respondents who use Google DV360 indicated using at least one other platform to buy display ads and 83 percent of respondents who use Google DV360 indicated using at least one other non-Google platform to buy display ads.[191] Figure 24 also shows that the results are similar for advertisers with less than $50,000 annual ad spend.

[190] Appendix J, at Exhibit 51.

[191] Exhibit 51. As noted above, the decoy display platform was not included in the count of platforms used to buy display ads by each respondent.

Figure 24. Share of Google DV360 Users Using Other Display Platforms Among Lower-Spend Advertisers



Notes and Sources: Exhibit 51. Values sum to 100%. Displayed values are rounded to the nearest percent and may appear to sum to greater or less than 100 percent after rounding.

147. Excluding respondents who selected one or more decoy response options from the analysis, approximately 96 percent of respondents who use Google DV360 indicated using at least one other platform to buy display ads and 79 percent of respondents who use Google DV360 indicated using at least one other non-Google platform to buy display ads.[192] For the subset of respondents with less than $50,000 in annual ad spend, excluding respondents who selected one or more decoy response options from the analysis, approximately 91 percent of respondents who use Google DV360 indicated using at least one other platform to buy display ads and 79 percent

[192] Appendix J, at Exhibit 51.

of respondents who use Google DV360 indicated using at least one other non-Google platform to buy display ads.[193]

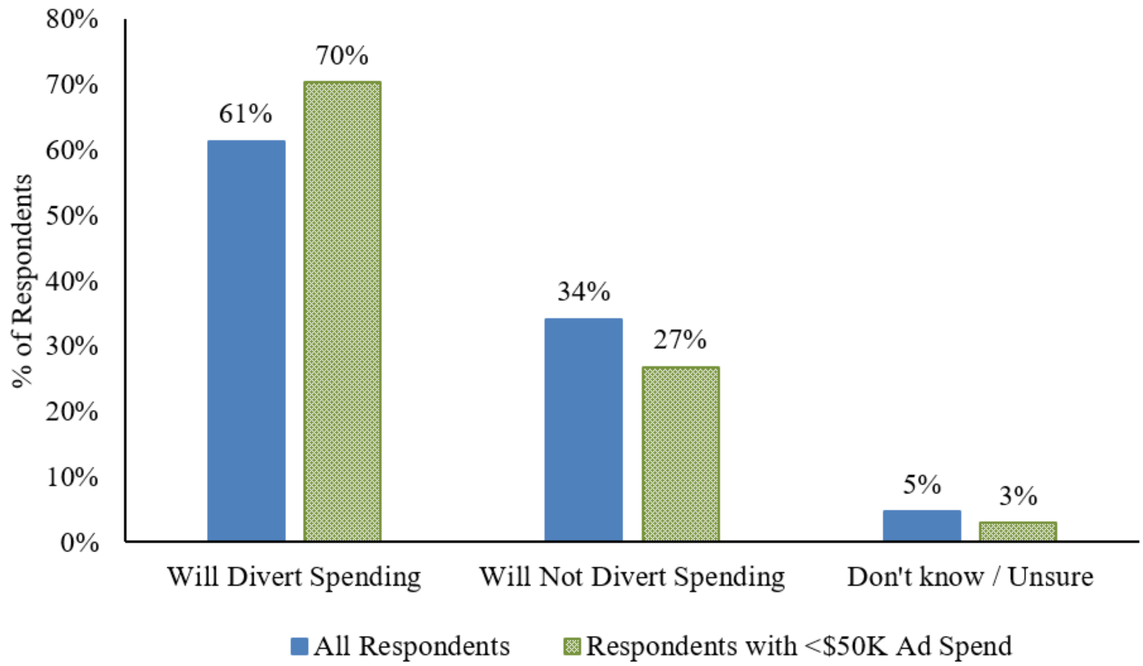
148. All respondents were asked to explain, in an open-ended response, what factors they consider when deciding where to buy digital ads from. Respondents mentioned a variety of different factors, including, for example, performance and effectiveness (*e.g.*, Respondent 1026: "A good amount of return on investment is a must factor to consider while buying the digital ads."; Respondent 675: "ROI and data privacy"; Respondent 2421: "Good ROI"), features offered by the platform (*e.g.*, Respondent 751: "Can you provide detailed and accurate targeting features."; Respondent 2120: "quality of the features it offers"), and reputation/credibility of the platform (*e.g.*, Respondent 511: "The platform where I will be purchasing should be very trusted."; Respondent 776: "Affordability and reputation"), among other factors.[194]

Responses to an Increase in the Cost of Display Advertising

149. In response to the scenario described above contemplating an increase in the cost of display advertising, approximately 61 percent of respondents indicated that they would divert some of their spending to other types of digital advertising, as illustrated in Figure 25.[195] As shown, the results are similar for respondents with less than $50,000 annual ad spend (70 percent of these respondents indicated that they would divert spending).

193 Appendix J, at Exhibit 51.
194 Appendix G.3.
195 Exhibit 58.

Figure 25. Share of Lower-Spend Advertisers Who Would Divert Spending

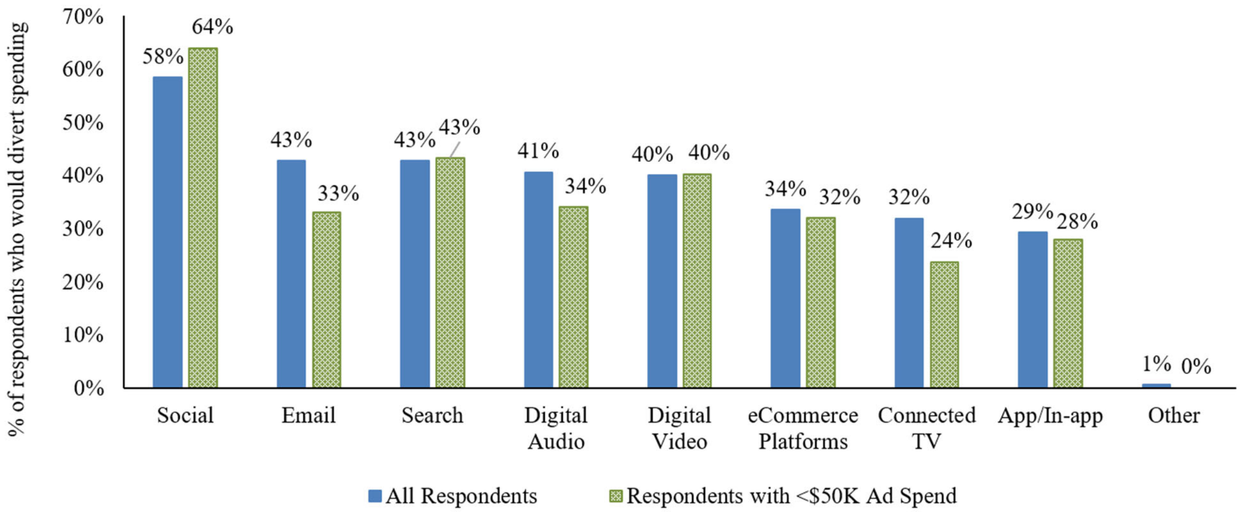


Notes and Sources: Exhibit 58. Values sum to 100%. Displayed values are rounded to the nearest percent and may appear to sum to greater or less than 100 percent after rounding.

150. Respondents who indicated that they would divert spending were then asked to identify which types of advertising they would divert spending to. As shown in Figure 26, the most common responses were social (58 percent of respondents who would divert spending), email (43 percent of respondents who would divert spending), and search (43 percent of respondents who would divert spending).[196] As shown, the results are fairly similar among the subset of respondents with less than $50,000 annual ad spend, with social (64 percent of respondents who would divert spending) and search (43 percent of respondents who would divert spending) as the most common responses.

[196] Exhibit 59.

Figure 26. Share of Lower-Spend Advertisers Who Would Divert Spending to Each Advertising Type

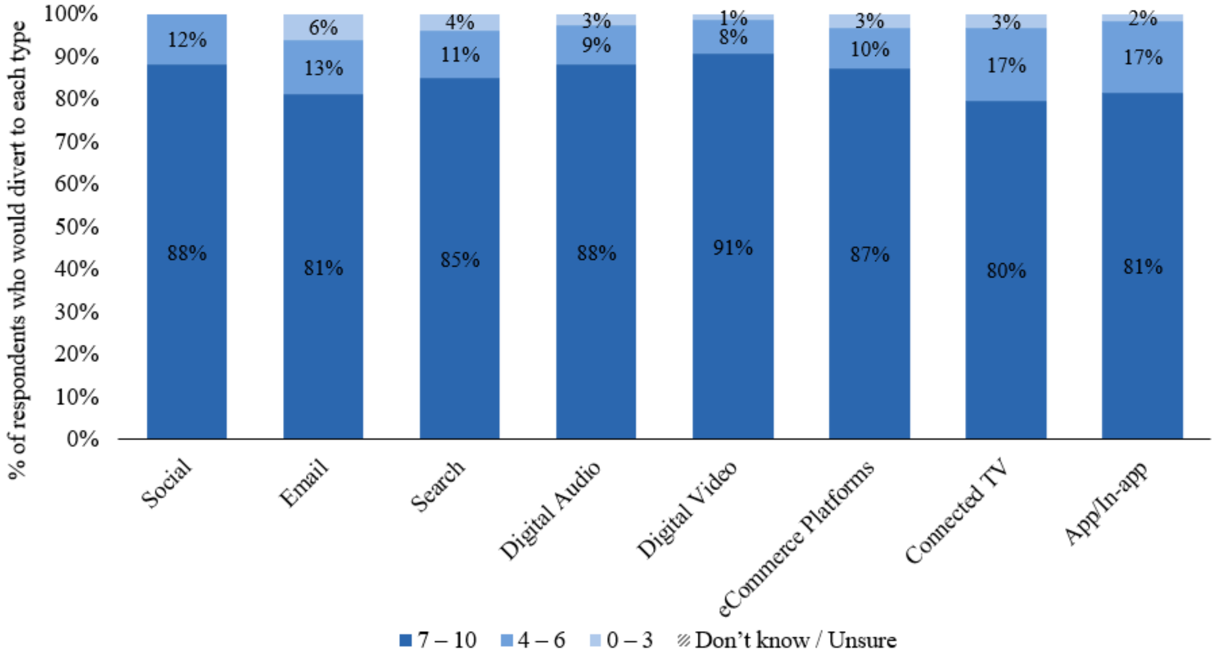


Notes and Sources: Exhibit 59.

151. Additionally, most respondents indicated that the extent to which they would divert spending to each advertising type selected was between 7 and 10 on a 0 to 10 point scale (where 0 represents no change in spending on a given type of advertising, and 10 represents a substantial increase in spending on a given type of advertising).[197] In other words, most respondents indicated that they would make relatively substantial increases to their spending on other types of advertising in response to an increase in the cost of display advertising.

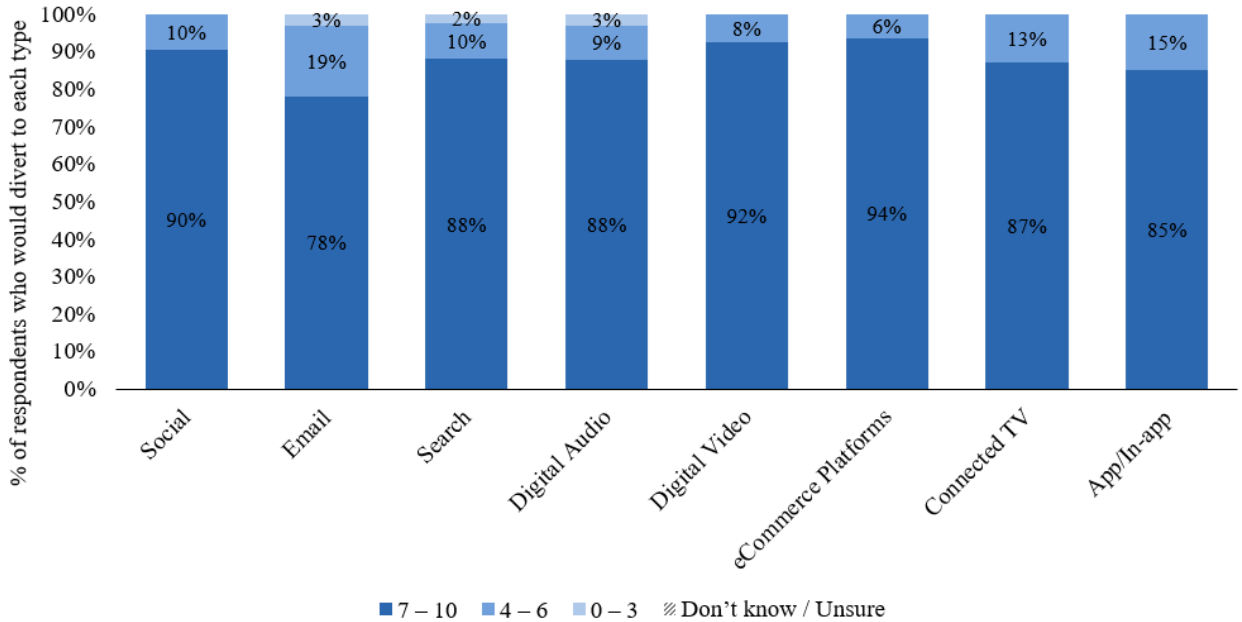
[197] Exhibit 62.

Figure 27A. Extent of Spending Increase Among Lower-Spend Advertisers (0 to 10 scale)



Notes and Sources: Exhibit 62. Values sum to 100% for each type. Displayed values are rounded to the nearest percent and may appear to sum to greater or less than 100 percent after rounding. One respondent (approximately 1 percent of respondents who would divert) indicated diverting spending to "Other" and rated the extent of the increase at 10 on a 10 point scale. Exhibits 60 and 61.

Figure 27B. Extent of Spending Increase Among Lower-Spend Advertisers with Less than $50,000 Annual Ad Spend (0 to 10 scale)



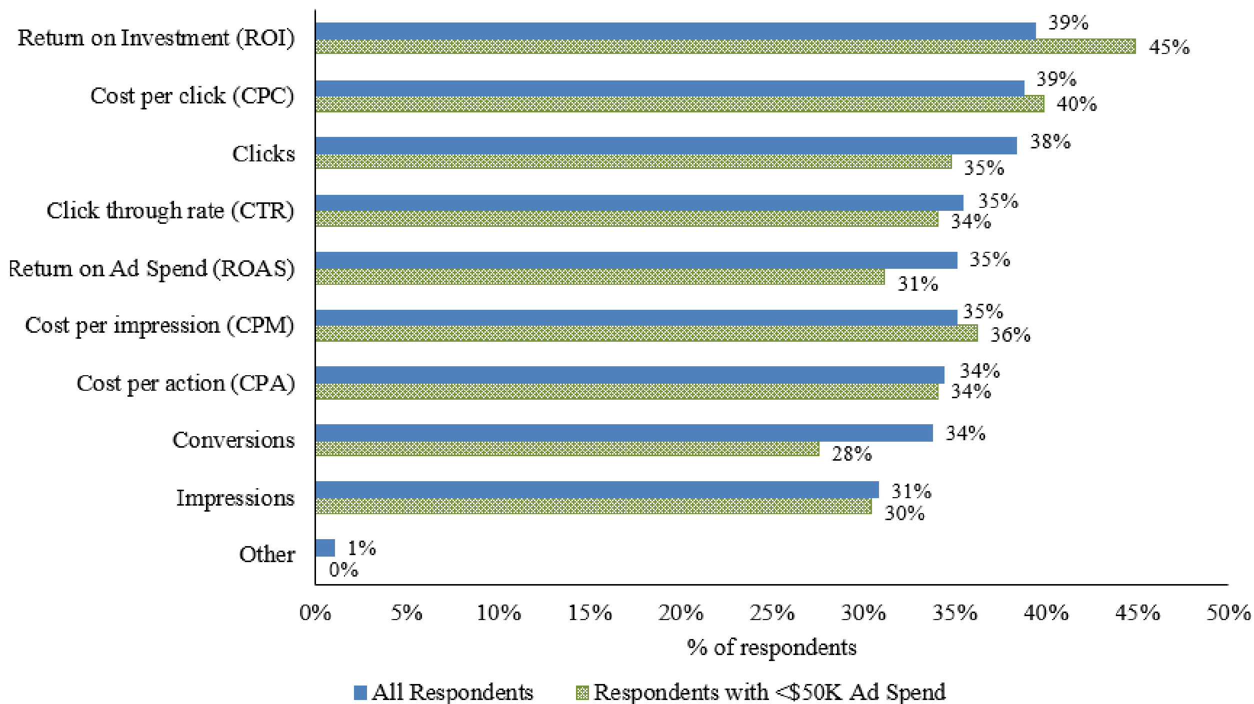
Notes and Sources: Exhibit 62. Values sum to 100% for each type. Displayed values are rounded to the nearest percent and may appear to sum to greater or less than 100 percent after rounding.

Assessment of Display Ad Performance

152. The most popular metrics used to assess the performance of display ads were "Return on Investment (ROI)" (39 percent of respondents), "Cost per Click (CPC)" (39 percent of respondents), "Clicks" (38 percent of respondents), "Click through rate (CTR)" (35 percent of respondents), and "Return on Ad Spend (ROAS)" (35 percent of respondents), as summarized in Figure 28.[198] As shown, the results are generally consistent for advertisers with less than $50,000 annual ad spend.

[198] Exhibit 63.

Figure 28. Share of Lower-Spend Advertisers Using Each Performance Metric



Notes and Sources: Exhibit 63.

153. Approximately 18 percent of respondents indicated that Return on Investment (ROI) was the most important metric for accurately assessing performance and approximately 12 percent of respondents indicated that Return on Ad Spend (ROAS) was most important.[199] Similarly, among advertisers with less than $50,000 annual ad spend, approximately 21 percent of respondents indicated that Return on Investment (ROI) was the most important metric for accurately assessing performance and approximately 14 percent of respondents indicated that Return on Ad Spend (ROAS) was most important.[200]

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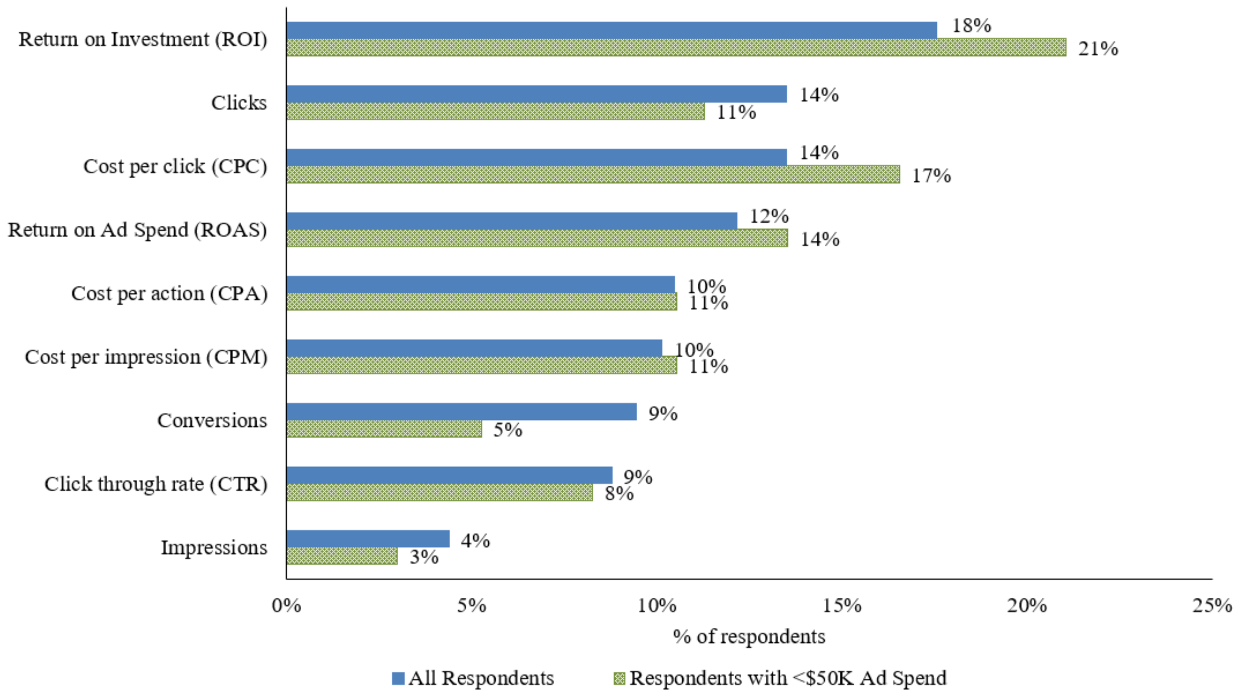
[199] Exhibit 64.
[200] Exhibit 64.

Figure 29. Share of Lower-Spend Advertisers Ranking Performance Metric as Most Important



Notes and Sources: Exhibit 64. Two respondents (less than 1 percent of respondents who used at least one metric to assess the performance of display advertising) selected "Don't know / Unsure." Values sum to 100%. Displayed values are rounded to the nearest percent and may appear to sum to greater or less than 100 percent after rounding.

154. Approximately 82 percent of respondents indicated that they measure or assess performance of display advertising at least monthly.[201] Similarly, approximately 85 percent of respondents with less than $50,000 annual ad spend reported measuring or assessing performance of display at least monthly.[202]

155. Approximately 60 percent of respondents ran experiments on their display ads in the past year.[203] Among those respondents, approximately 62 percent ran experiments related to creatives, 47 percent ran experiments related to audiences, 41 percent ran experiments related to

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201 Exhibit 65. Specifically, approximately 9 percent of respondents indicated measuring performance daily, 41 percent indicated measuring performance weekly, and 32 percent indicated measuring performance monthly.

202 Exhibit 65. Specifically, approximately 7 percent of respondents indicated measuring performance daily, 50 percent indicated measuring performance weekly, and 28 percent indicated measuring performance monthly.

203 Exhibit 66.

ROI/ROAS, and 41 percent ran experiments related to ad buying tool performance.[204] Similarly, among the subset of respondents with less than $50,000 annual ad spend, approximately 64 percent of respondents ran experiments on their display ads, with the most common types of experiments relating to creatives, ROI/ROAS, and ad buying tool performance.[205]

D. Key Implications of the Findings

156. Performance measurement: Similar to higher-spend advertisers, the results of the survey show that lower-spend advertisers typically rely on a variety of performance measures, including Return on Investment (ROI) and Return on Ad Spend (ROAS), as well as Clicks and Cost per Click (CPC) (among other measures), and tend to review performance often. Based on these and other measures, advertisers can assess the relative effectiveness or ineffectiveness of the various advertising tools they use, including display advertising, and potentially react to performance changes.

157. Substitution: As with higher-spend advertisers, using the performance feedback that they receive regarding costs and returns, lower-spend advertisers can adjust their advertising spending allocation. Similar to the Higher-Spend Advertiser Survey, respondents were presented with a hypothetical scenario involving a "small but significant" increase in the cost of display advertising, assuming that the costs associated with other digital advertising types remain the same. The results indicated that most lower-spend advertisers (61 percent) would divert spending to other advertising types.[206] The most popular advertising types to which lower-spend advertisers would divert spending include social, email, and search, generally suggesting that at least social, email, and search serve as substitutes for display advertising. In particular, the findings indicate that

[204] Exhibit 67.
[205] Exhibits 66-67.
[206] Exhibit 58.

many lower-spend advertisers would reallocate advertising spending if they determine that their display advertising is less cost effective than it previously was. These results suggest that, if the cost of display advertising increases, many advertisers will take action as a result, and the parties responsible for such cost increases will likely lose share to other advertising channels.

158. Multi-homing: The survey results show that most lower-spend advertisers use multiple digital advertising types and, within display advertising specifically, use multiple platforms to buy display ads. In particular, most advertisers use multiple other types of digital advertising in addition to display, with the most popular types being social, search, digital video, and email advertising. In addition, most advertisers (approximately 80 percent) use multiple platforms to buy display ads.[207] The survey results further indicated that multi-homing is common for users of Google ad buying tools. Specifically, approximately 87 percent of lower-spend advertisers that use Google Ads also use at least one other platform for display ads.[208]

159. Thus, the survey findings indicate that most lower-spend advertisers use a variety of other digital advertising types and employ multiple ad buying tools for display advertising, suggesting they have a variety of alternatives to Google ad buying tools. That is, lower-spend advertisers, by and large, already practice multi-homing, which facilitates flexible allocations and tool selection as desired.

160. Display ad spending: Similar to higher-spend advertisers, the survey results indicate that most lower-spend advertisers spend a relatively small portion of their budget on display advertising. Among lower-spend advertisers who use display advertising, display

[207] Exhibit 49.
[208] Exhibit 51. Approximately 80 percent of Google Ads users use at least one non-Google ad buying tool for programmatic display. Exhibit 51.

advertising accounts for an average share of approximately 33 percent and a median share of approximately 20 percent of their overall digital budget.[209]

161. Sophistication of lower-spend advertisers: The survey results also suggest that, beyond the various metrics they use to track performance of their advertising spending and make adjustments, most lower-spend advertisers also conduct experiments related to various advertising aspects, including creatives, audiences, and ROI/ROAS, among others, to further optimize their spending.

VI. AD AGENCY SURVEY

A. Overview

162. The questions in the Ad Agency Survey were largely the same or similar to those in the Higher-Spend Advertiser Survey. As described in further detail below, I made certain modifications to ensure the questionnaire was clear and suitable for respondents who work at advertising agencies and may work on behalf of multiple clients at the same time. As with the Lower-Spend Advertiser Survey, these modifications were based on the preliminary interviews, as well as discussions with AP.

163. For most of the questionnaire, I instructed ad agency respondents to answer the questions as they relate to the client on which they spend the most time, so that the point of reference was consistent across the sample and did not involve trying to average different advertising clients. I also updated certain questions related to job responsibilities and involvement to reflect the fact that the respondents in the Ad Agency Survey advise or engage in advertising efforts on behalf of clients.

209 Exhibit 57.

B. Methodology

164. Four pre-test interviews for the Ad Agency Survey (as described above) were conducted on September 5, 2023. No changes were made based on the pre-testing. The actual Ad Agency Survey was administered from September 6, 2023 to September 21, 2023. The full survey questionnaire is included in Appendix H.1. Screenshots of the survey as it appeared to respondents are presented in Appendix H.2.

1. Survey Universe and Screening Criteria

165. The survey universe for the Ad Agency Survey included individuals based in the U.S. who work for ad agencies and assist their clients with media strategy (*i.e.*, advising clients on media/marketing strategies and/or how to spend advertising funds). Because a primary focus of the survey was to assess decision-making regarding programmatic display advertising specifically, the survey universe was also limited to ad agency employees who have used programmatic display advertising in the past year for their primary client and who were personally involved in assisting their primary client with decisions regarding their use of display advertising, including determining or advising the client regarding strategies, budgets, use of buying tools, and/or management of digital display campaigns.

166. The screening questions used to determine whether the respondents met the definition of the relevant survey universe and thus would qualify for the main questionnaire for the Ad Agency Survey were similar to those used in the Higher-Spend Advertiser Survey, except for certain differences that I describe below.

167. Respondents were asked to select which description best characterizes their company (QS7), and had to indicate working for a media agency or a full service agency in order to proceed with the survey. If the respondent indicated working for a full service agency, they

were asked a follow-up question (QS8) regarding their primary involvement, and had to indicate that they were primarily involved in media strategy (rather than creative strategy) in order to proceed.[210]

> **QS7.** Which of the following best characterizes the type of company you work for? *(Please select only one option.)*
>
> - ⦿ **Advertiser/Marketer** – your company sells products or services and advertises/markets its products or services
> - ⦿ **Creative Agency** – your company designs or produces marketing content and/or advises clients on their creative media/marketing strategies
> - ⦿ **Media Agency** – your company advises clients on their media/marketing strategies and/or how to spend their advertising funds
> - ⦿ **Full Service Agency** – your company handles both Creative and Media strategy and/or execution
> - ⦿ **Other** (*please describe*): **[INSERT TEXT BOX]**
>
> **[TERMINATE IF NEITHER "Full Service Agency" NOR "Media Agency" IS SELECTED]**
>
> **QS8. [IF FULL SERVICE AGENCY SELECTED IN QS7]** You indicated that you work for a Full Service Agency. Does your work primarily involve Creative strategy (i.e., designing or producing marketing content and/or advising clients on creative strategies) or Media strategy (i.e., advising clients on media/marketing strategy and/or how to spend advertising funds)? *(Please select only one option.)*
>
> - ⦿ Creative Strategy
> - ⦿ Media Strategy
> - ⦿ None of the above
> - ⦿ Don't know / Unsure
>
> **[TERMINATE IF "Media Strategy" IS NOT SELECTED]**

168. I then instructed respondents to answer all subsequent questions from the perspective of the client on which they spend the most time:

> **QS10.** The following questions will ask you about your advertising decisions and practices. For these questions, please think about **the client**

[210] The order of the presented response options was randomized (except for "Other," "None of the above," and "Don't know / Unsure" as applicable).

> **you spend the most time on** and answer the question from the perspective of that client. If there are multiple clients you spend the most time on, please answer the following questions from the perspective of the most typical of those clients.

169. Unlike the Higher-Spend Advertiser Survey and Lower-Spend Advertiser Survey, I did not impose a required level of advertising spend for the Ad Agency Survey (or tailor the survey questions differently based on the level of advertising spend of the respondent's primary client) since respondents at ad agencies handle various advertising tasks across multiple clients, which provides them the requisite level of sophistication to understand the advertising terminology used in the survey. The questionnaire did ask respondents about the level of advertising spend of their primary client. In most cases, the primary client spending would place them in the higher-spend group (*i.e.*, advertisers spending more than $500,000 annually).[211]

170. I modified the screener question related to personal involvement such that respondents who advise clients on marketing strategies or budgets would be qualified for the survey, even though they might not be personally responsible for making the final decisions:[212]

> **QS17.** In the **last 12 months**, in which of the following ways have you personally been involved in **digital display** advertising efforts on behalf of the client you spend the most time on? *(Select all that apply.)*
>
> - ❒ I determine or advise the client regarding overall strategies and/or budgets for digital display.
> - ❒ I determine or advise the client regarding which buying tools and/or demand-side platforms (DSPs) to use for digital display.
> - ❒ I regularly use self-serve ad platforms to manage digital display campaigns for the client.
> - ❒ I oversee a team/individuals that use(s) self-serve ad platforms to manage digital display campaigns for the client.
> - ❒ I regularly set up audience/target parameters for programmatic digital display buying for the client.
> - ❒ I oversee a team/individuals that set(s) up audience/target parameters for programmatic digital display buying for the client.

---

211 *See* Exhibit 73.

212 The order of the presented response options was randomized (except for "None of the above" and "Don't know / Unsure").

- ❒ I measure results of digital display campaigns for the client.
- ❒ I oversee a team/individuals that measure(s) results of digital display campaigns for the client.
- ⦿ None of the above **[EXCLUSIVE]**
- ⦿ Don't know / Unsure **[EXCLUSIVE]**

[TERMINATE IF NONE OF "I determine or advise the client regarding overall strategies and/or budgets for digital display**", "**I determine or advise the client regarding which buying tools and/or demand-side platforms (DSPs) to use for digital display**", "**I regularly use self-serve ad platforms to manage digital display campaigns for the client**", AND "**I oversee a team/individuals that use(s) self-serve ad platforms to manage digital display campaigns for the client**" ARE SELECTED]**

171. The remaining screening criteria in the Ad Agency Survey were the same as those in the Higher-Spend Advertiser Survey, focusing specifically on the client on which respondents spend the most time.[213]

172. Similar to the Higher-Spend Advertiser Survey and the Lower-Spend Advertiser Survey, respondents were also asked a series of questions regarding their current job title or level and the market sector and use of social media platforms, if any, for the client on which they spend the most time. The information gathered from these questions was used for data analysis purposes and not for screening purposes.

173. Consistent with the definition of the survey universe, the survey sample thus included respondents who primarily work on media strategy at an ad agency, had spent some advertising budget on digital advertising in the past year for the client on which they spend the most time, and had used programmatic display advertising in the past year for the client on which they spend the most time. Additionally, respondents must have been personally involved in

[213] Specifically, QS1-QS6, QS11-QS16, and QS18 in the Ad Agency Survey were the same as screening questions in the Higher-Spend Advertiser Survey. The answer options for QS9 ("Which of the following best characterizes your current job title/level?") were modified slightly to reflect job titles/levels more typical of respondents who work at ad agencies. *See* Appendix F.1; Appendix H.1.

determining or advising clients on strategies, budgets, or ad buying tools for digital display or using self-serve ad platforms to manage digital display campaigns.

2. Main Questionnaire

174. After passing the screening questions, qualified respondents entered the main questionnaire and were given the same standard introductory instructions (Q1) as in the Higher-Spend Advertiser Survey. As noted above, the main questionnaire was broadly similar to the Higher-Spend Advertiser Survey, except for certain differences that I describe below. The main questionnaire began with standard preliminary instructions, followed by questions that addressed the following topics, as tied to the advertising client on which respondents spent the most time:

- use of different digital advertising types;
- reactions to a hypothetical increase in the cost of programmatic display advertising;
- use of ad buying tools for programmatic display advertising; and
- methods to assess the performance of programmatic display advertising.

175. After passing the screening questions, qualified respondents were given the following instructions:

> **Q1.** You have been selected to answer additional questions about your advertising practices for **the client you spend the most time on**. Please continue to think about the client you spend the most time on and answer the question from the perspective of that client. If there are multiple clients you spend the most time on, please answer the following questions from the perspective of the most typical of those clients.
>
> For each question, if you don't know or are unsure, please don't guess. Simply indicate this in your response by selecting the "Don't know / Unsure" option. There are no right or wrong answers.
>
> Also, you should complete this survey without stopping in the middle. Please make sure not to consult anyone; use your browser's "Back" button; or open another browser while working on this survey.

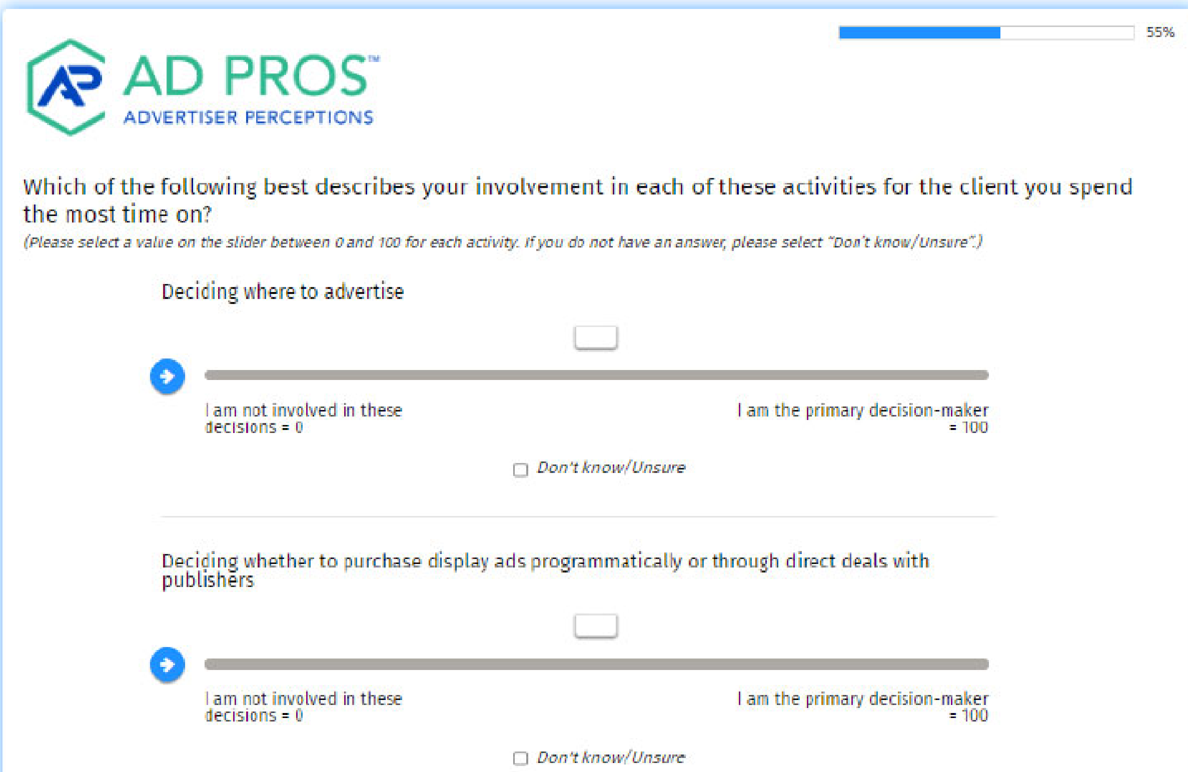
176. Next, instead of asking respondents about their use of ad agencies (as in the Higher-Spend Advertiser Survey and the Lower-Spend Advertiser Surveys), I asked respondents about the extent to which they were involved in advertising activities for the client on which they spend the most time:

> **Q2.** Which of the following best describes your involvement in each of these activities for the client you spend the most time on? *(Please select a value on the slider between 0 and 100 for each activity. If you do not have an answer, please select "Don't know / Unsure".)*[214]

Determining initial advertising budget	**[INSERT SLIDER]**
Allocating budget across different advertising types	**[INSERT SLIDER]**
Increasing/decreasing spending on a particular type of advertising	**[INSERT SLIDER]**
Increasing/decreasing spending on a particular ad campaign	**[INSERT SLIDER]**
Making changes to a campaign based on its performance	**[INSERT SLIDER]**
Deciding where to advertise	**[INSERT SLIDER]**
Deciding whether to purchase display ads programmatically or through direct deals with publishers	**[INSERT SLIDER]**
Measuring performance of display ad campaigns	**[INSERT SLIDER]**

177. Below is an example of how Q2 appeared to respondents in the survey:[215]

214 The order of the activities was randomized.
215 *See* Appendix H.2, at H.2-21-22.



178. As indicated, the rest of the questionnaire was the same as the Higher-Spend Advertiser Survey and asked respondents to answer from the viewpoint of the client on which they spend the most time.

C. Survey Findings

179. In this section, I will summarize the main survey findings for the Ad Agency Survey. Additional findings can be found in Exhibits 68 to 110. The complete data set of all individual participants' responses is presented in Appendix H.3.

180. A total of 463 respondents completed the survey.[216] Of those, 71 respondents chose to exclude their responses in QF1.[217] Consistent with common practice, 11 respondents who took

216 Exhibit 68.
217 Exhibit 68. Respondents who selected "Exclude my responses" in QF1 were not included in the respondent-level data files provided to me by Advertiser Perceptions and thus I do not have access to their responses to other questions in the survey.

too little time (less than 100 seconds) or took too much time (more than 3 hours) were removed from the sample.[218] A total of 381 respondents are included in the summary tables.[219]

181. In total, approximately 33 percent of respondents were women and 67 percent were men.[220] With respect to age, approximately 25 percent of respondents were between 18 and 34, 63 percent were between 35 and 49, and 12 percent were 50 years old or older.[221] Approximately 37 percent of respondents indicated that their current job title/level was best described as "C-Level (CEO, COO, CMO, etc.)," 13 percent identified their job title/level as "Strategist," 12 percent identified their job title/level as "Social Media Manager," 8 percent identified their job title/level as "Media Planner," and 8 percent identified their job title/level as "Account Manager / Account Executive."[222] Approximately 55 percent of respondents indicated that the client on which they spend the most time spent less than $15 million on advertising in the last 12 months, and 45 percent spent more than $15 million on advertising in the last 12 months.[223]

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[218] Exhibit 68. Changing these cutoffs to, for example, three minutes and two hours does not meaningfully impact the results. *See* Exhibit 105.

[219] Exhibit 68. Two survey questions included "decoy" response options: QS16 regarding the use of different social media platforms (including "FriendLinx" as a decoy response option) and Q7 regarding the use of different ad buying tools (including "Quorexx" and "Ad Step Technologies" as decoy response options). Overall, approximately 13 percent of respondents selected at least one of the three decoy response options. *See* Appendix J, at Exhibit 68. Given that these selections might have been inadvertent, these respondents were not excluded from the analytical sample. In Appendix J, I present an alternative set of results for all questions based on an analytical sample that excludes respondents who selected one or more decoy response options in QS16 or Q7. As shown, excluding these respondents has virtually no effect on the results (and the difference is not statistically significant).

[220] Exhibit 70.

[221] Exhibit 70.

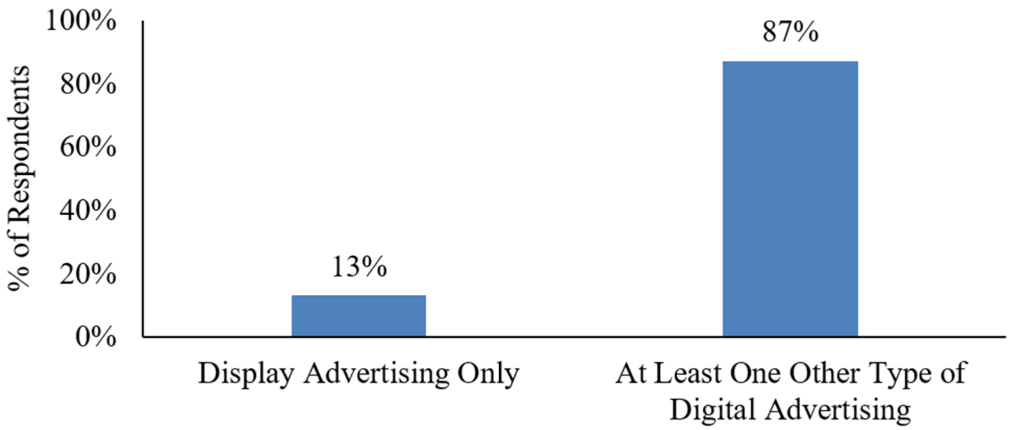
[222] Exhibit 71.

[223] Exhibit 73. Calculated as (5 + 8 + 6 + 29 + 45 + 69 + 48) / 381 = 55.1 percent and (65 + 39 + 21 + 26 + 9 + 10) / 381 = 44.6 percent.

Use of Digital Advertising Types and Role of the Ad Agency

182. As shown in Figure 30, in addition to display advertising,[224] approximately 87 percent of respondents used at least one other type of digital advertising for the client on which they spend the most time.[225]

Figure 30. Share of Ad Agency Respondents Using More than One Type of Digital Advertising



Notes and Sources: Exhibit 76.

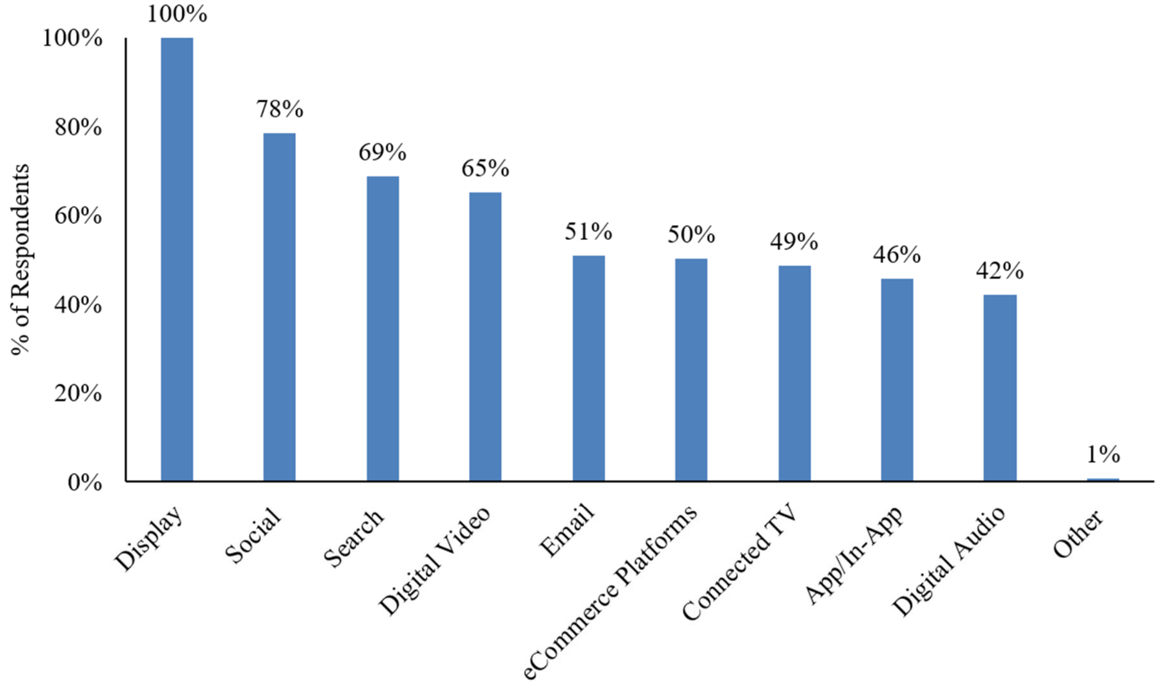
183. As shown in Figure 31, the most popular other types of digital advertising were social advertising (78 percent of respondents), search advertising (69 percent of respondents), digital video advertising (65 percent of respondents), and email advertising (51 percent of respondents).[226]

224 As described in paragraph 52, the definitions of advertising types were created for purposes of these surveys only, in order to test—among other things—the degree to which advertisers viewed certain types of ads, including ads shown on social media platforms, as substitutes for other types of display ads. I did not conduct a survey to determine how advertisers use the terms "display" or "social."

225 Exhibit 76.

226 Exhibit 75.

Figure 31. Share of Ad Agency Respondents Using Digital Advertising Types



Notes and Sources: Exhibit 75. All respondents must have used display advertising in the past year to qualify for survey participation.

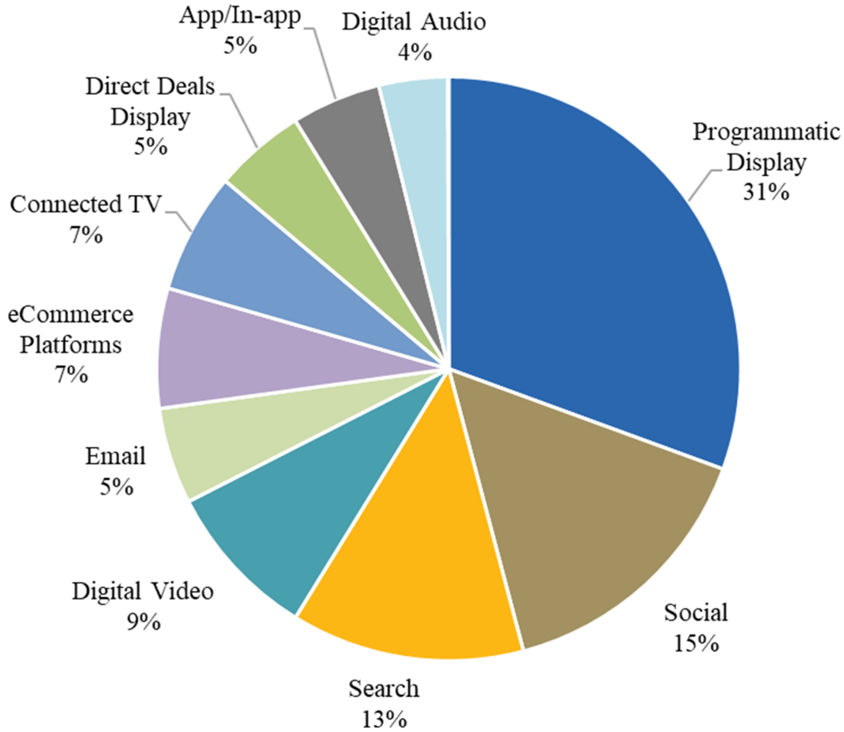
184. In QS15, approximately 46 percent of respondents indicated that they used both programmatic buying methods and direct deals to purchase display ad inventory for the client on which they spend the most time.[227]

185. Question Q3 asked respondents to estimate, for the client on which they spend the most time, the share of the digital advertising budget that was used for each digital advertising type over the past year. As summarized in Figure 32, the responses to this question indicate that programmatic display advertising accounted for an average of 31 percent of respondents' overall digital advertising budgets over the past year.[228] Programmatic display advertising accounted for

[227] Exhibit 77.
[228] Exhibit 80.

a median of approximately 20 percent of respondents' overall digital advertising budgets over the past year.[229]

Figure 32. Average Share of Budget Allocated to Each Advertising Type Among Ad Agency Respondents



Notes and Sources: Exhibit 80. Respondents must have used programmatic display advertising in the past year to qualify for survey participation. Values sum to 100%. Displayed values are rounded to the nearest percent and may appear to sum to greater or less than 100 percent after rounding.

186. Respondents indicated being heavily involved in a range of different activities for the client on which they spend the most time, including setting advertising budgets, allocating budget across different advertising types, increasing/decreasing spending on a particular type of advertising or a particular ad campaign, and making changes to a campaign based on its performance.[230]

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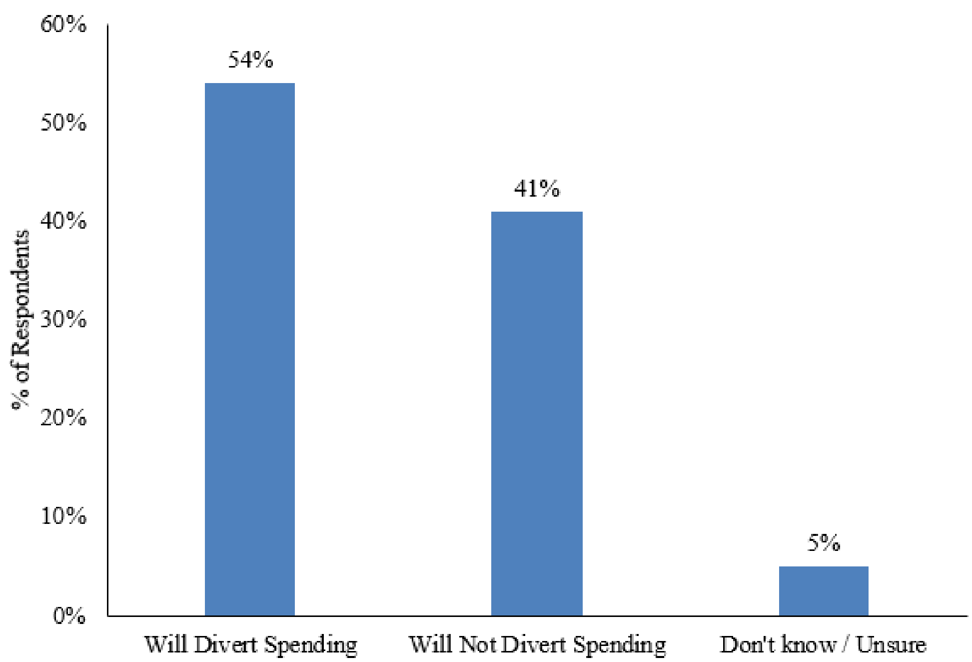
229 Exhibit 80.
230 Exhibit 79.

Responses to an Increase in the Cost of Programmatic Display Advertising

187. Question Q4 described a scenario in which the cost of programmatic display advertising recently increased by a small but significant amount and would remain elevated for the foreseeable future (while the cost of other advertising types had not changed and were not expected to change), and asked respondents whether or not they would divert some advertising spending for the coming year to other types of digital advertising. As shown in Figure 33, in response to this scenario, approximately 54 percent of respondents indicated that they would divert some spending to other types of digital advertising for the client on which they spend the most time.[231]

Figure 33. Share of Ad Agency Respondents Who Would Divert Spending



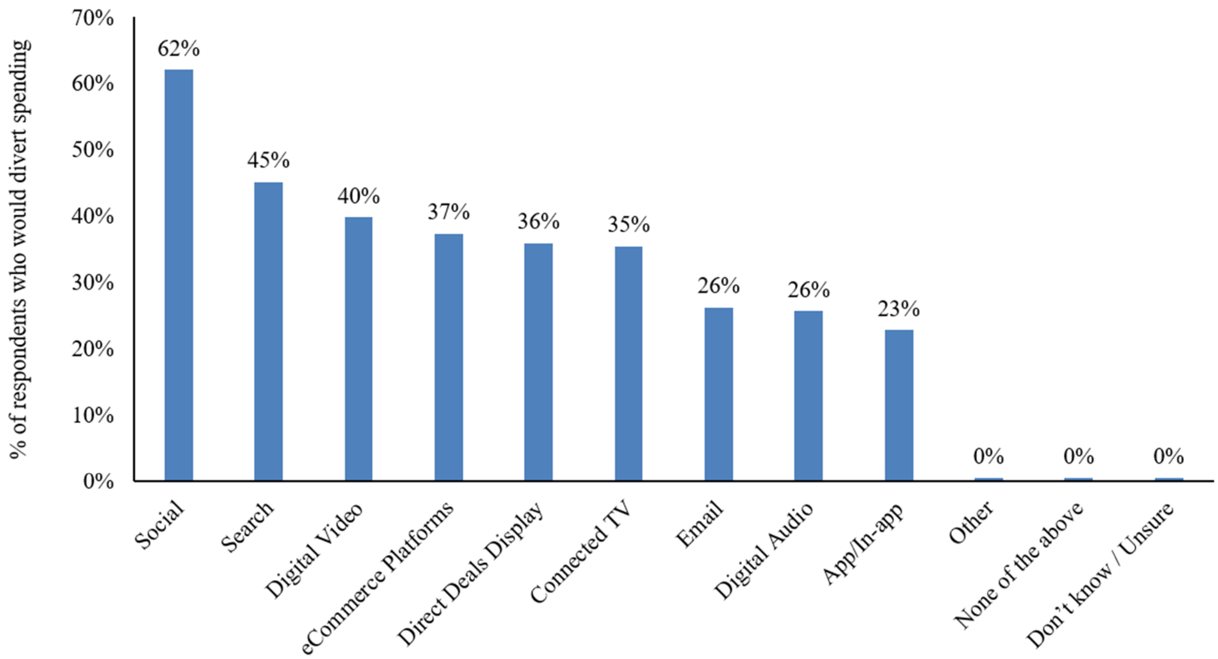
Notes and Sources: Exhibit 81. Values sum to 100%. Displayed values are rounded to the nearest percent and may appear to sum to greater or less than 100 percent after rounding.

188. Respondents who indicated that they would divert spending were then asked in Q5 to identify which types of advertising they would divert spending to. As summarized in Figure

[231] Exhibit 81.

34, the most common responses were social (62 percent of respondents who would divert spending), search (45 percent of respondents who would divert spending), and digital video (40 percent of respondents who would divert spending).[232]

Figure 34. Share of Ad Agency Respondents Who Would Divert Spending to Each Advertising Type

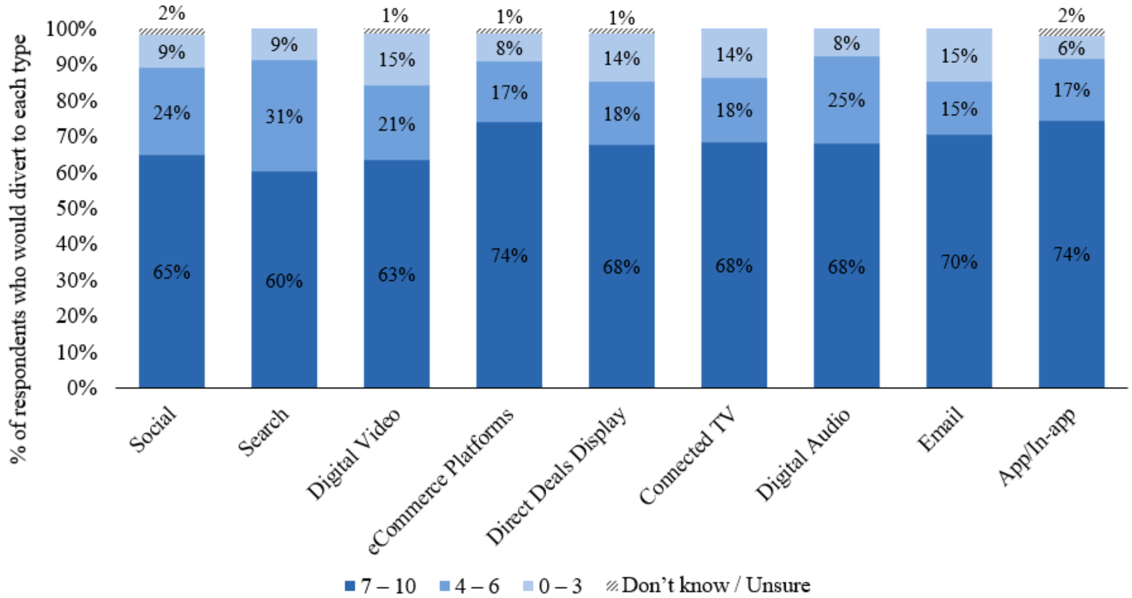


Notes and Sources: Exhibit 82.

189. In Q6, most respondents indicated that the extent to which they would divert spending to each advertising type selected in Q5 was between 7 and 10 on a 0 to 10 point scale (where 0 represents no change in spending on a given type of advertising, and 10 represents a substantial increase in spending on a given type of advertising).[233] In other words, most respondents indicated that they would make relatively substantial increases to their spending on other types of advertising in response to an increase in the cost of programmatic display advertising.

[232] Exhibit 82.
[233] Exhibit 85.

Figure 35. Share of Ad Agency Respondents by Extent of Spending Increase (0 to 10 scale)



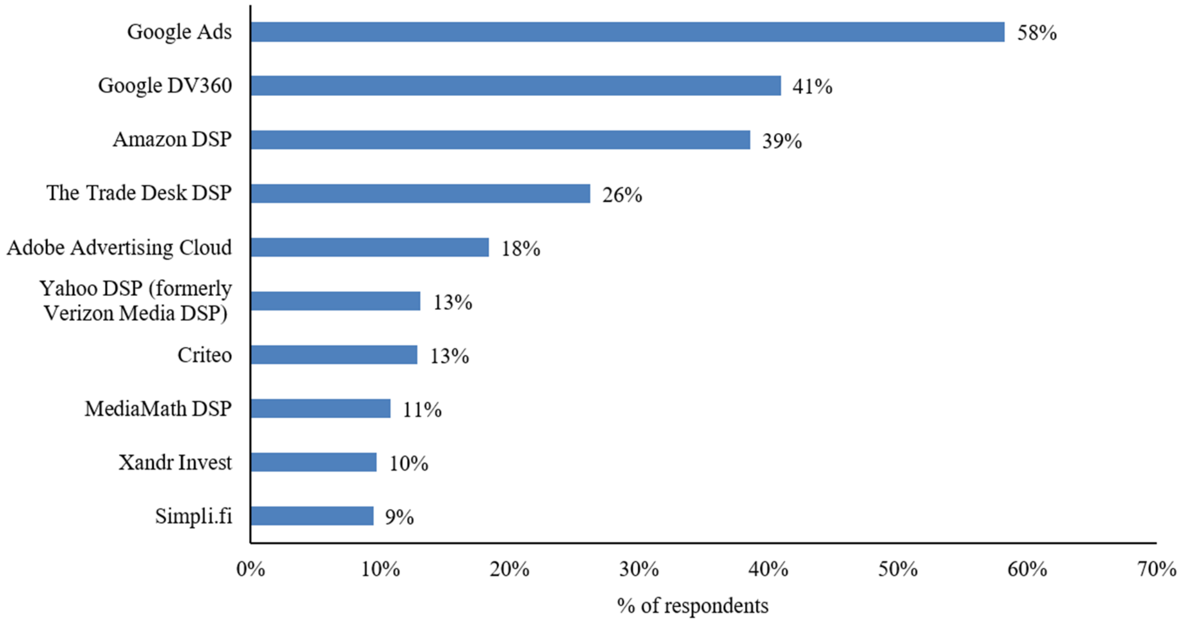
Notes and Sources: Exhibit 85. Values sum to 100% for each type. Displayed values are rounded to the nearest percent and may appear to sum to greater or less than 100 percent after rounding. One respondent (less than 1 percent of respondents who would divert) indicated diverting spending to "Other" and rated the extent of the increase at 3 on a 10 point scale. Exhibits 83 and 84.

Use of Ad Buying Tools for Programmatic Display Ads

190. In response to Q7 regarding usage of different ad buying tools for the client on which they spend the most time, the most commonly used ad buying tools for programmatic display advertising were Google Ads (58 percent of respondents), Google DV360 (41 percent of respondents), Amazon DSP (39 percent of respondents), The Trade Desk DSP (26 percent of respondents), and Adobe Advertising Cloud (18 percent of respondents).[234]

[234] Exhibit 86. Approximately 72 percent of respondents used at least one of Google Ads and Google DV360. Exhibit 88.

Figure 36. Share of Ad Agency Respondents Using Ad Buying Tool (10 Most Popular Tools)



Notes and Sources: Exhibit 86.

191. As noted above, "Ad Step Technologies" and "Quorexx" were included as decoy/control ad buying tool names in Q7. Approximately 8 percent of respondents indicated that they used Ad Step Technologies and 4 percent of respondents indicated that they used Quorexx.[235] In addition, QS16 regarding social media platform usage included a decoy social media platform "FriendLinx," and about 5 percent of respondents selected this option.[236] Overall, approximately 13 percent of respondents in the analytical sample selected at least one of the three decoy response options.[237] In this section, I present certain results regarding use of multiple buying tools both including and excluding respondents who selected one or more decoy response options. As demonstrated below, the main results are very similar regardless of whether respondents who selected one or more decoy response options are included in or excluded from the analysis. Given

235 Exhibit 86.
236 *See* Exhibit 78.
237 A total of 50 respondents selected at least one decoy response option (or approximately 13 percent of the overall analytical sample of 381 respondents). *See* Appendix J, at Exhibit 68.

that these selections might have been inadvertent, these respondents were not excluded from the analytical sample.[238]

192. Across the full analytical sample, approximately 73 percent of respondents indicated using more than one ad buying tool for programmatic display advertising for the client on which they spend the most time.[239] Respondents reported using an average of 3.1 ad buying tools in the past year for the client on which they spend the most time.[240] Respondents who indicated using more than one ad buying tool in the past year were asked an open-ended question regarding why they used multiple ad buying tools. In response, respondents mentioned a variety of reasons including, for example, testing the relative performance of different tools (*e.g.*, Respondent 1402: "Compare the advertising effectiveness of different platforms…"; Respondent 1824: "Experiment with different tools to find the most effective strategies for optimizing campaign performance and ROI."; and Respondent 2034: "Testing and optimization") and mitigating risk of potential technical failures (*e.g.*, Respondent 2688: "Relying on a single ad buying tools can be risky if that platform experience technical changes."; Respondent 3378: "Using multiple ad buying tools reduces the risk in technical issued or policy changes etc.").[241]

193. Excluding respondents who selected one or more decoy response options from the analysis, approximately 71 percent of respondents indicated using more than one ad buying tool for programmatic display advertising for the client on which they spend the most time.[242]

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238 An alternative set of results for all questions based on an analytical sample that excludes respondents who selected one or more decoy response options is in Appendix J.

239 Exhibit 87. The decoy ad buying tools were not included in the count of ad buying tools used by each respondent. In other words, if a respondent indicated using The Trade Desk DSP, Google DV360, and Quorexx, he or she was considered to use only two ad buying tools (The Trade Desk DSP and Google DV360).

240 Exhibit 87.

241 Appendix H.3.

242 Appendix J, at Exhibit 87.

Respondents reported using an average of 2.9 ad buying tools for the client on which they spend the most time.[243]

194. Users of Google ad buying tools also indicated using multiple ad buying tools. For the full analytical sample, approximately 83 percent of respondents who use Google Ads indicated using at least one other ad buying tool for programmatic display for the client on which they spend the most time and 79 percent of respondents who use Google Ads indicated using at least one other non-Google ad buying tool for programmatic display for the client on which they spend the most time.[244,245] These results are illustrated in Figure 37 below. Excluding respondents who selected one or more decoy response options from the analysis, approximately 81 percent of respondents who use Google Ads indicated using at least one other ad buying tool for programmatic display for the client on which they spend the most time and 77 percent of respondents who use Google Ads indicated using at least one other non-Google ad buying tool for programmatic display for the client on which they spend the most time.[246]

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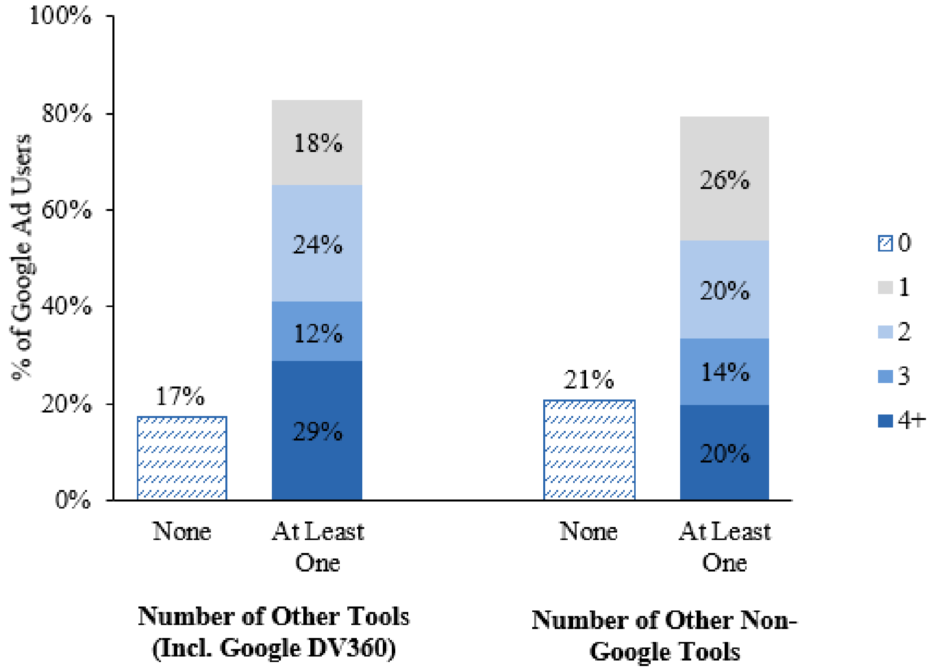
243 Appendix J, at Exhibit 87.

244 Exhibit 89. As noted above, the decoy ad buying tools were not included in the count of ad buying tools used by each respondent.

245 As shown in Exhibits 91 to 93, most respondents who use only Google Ads for programmatic display advertising also use other types of digital advertising (including social, search, digital video, and/or email, among others), and spend less than 40 percent of their overall advertising budget on programmatic display advertising.

246 Appendix J, at Exhibit 89.

Figure 37. Share of Google Ads Users Using Other Ad Buying Tools Among Ad Agency Respondents



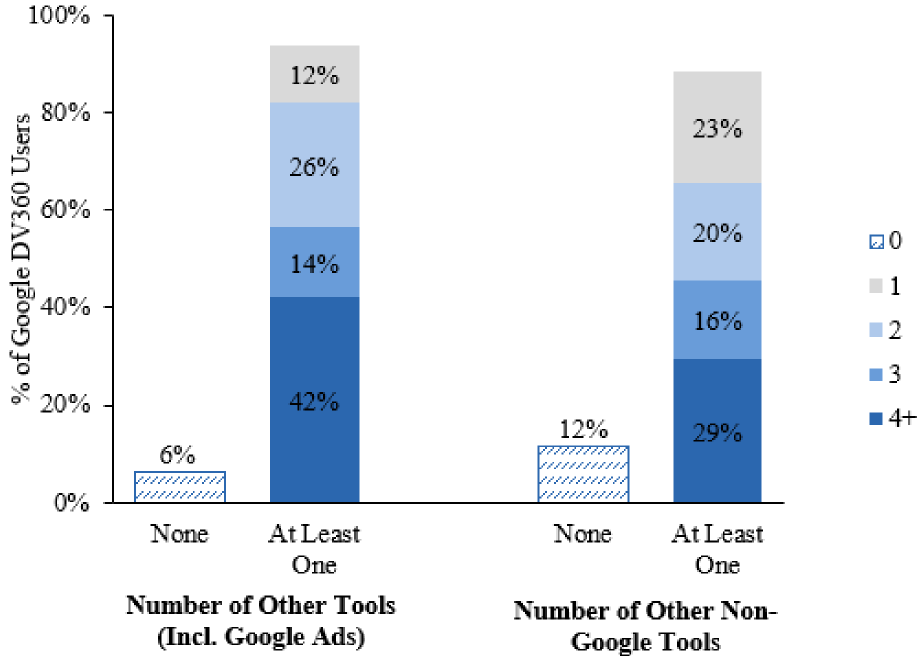
Notes and Sources: Exhibit 89. Values sum to 100%. Displayed values are rounded to the nearest percent and may appear to sum to greater or less than 100 percent after rounding.

195. As shown in Figure 38, for the full analytical sample, approximately 94 percent of respondents who use Google DV360 indicated using at least one other ad buying tool for programmatic display for the client on which they spend the most time and 88 percent of respondents who use Google DV360 indicated using at least one other non-Google ad buying tool for programmatic display for the client on which they spend the most time.[247] Excluding respondents who selected one or more decoy response options from the analysis, approximately 93 percent of respondents who use Google DV360 indicated using at least one other ad buying tool for programmatic display for the client on which they spend the most time and 87 percent of

[247] Exhibit 89. As noted above, the decoy ad buying tools were not included in the count of ad buying tools used by each respondent.

respondents who use Google DV360 indicated using at least one other non-Google ad buying tool for programmatic display for the client on which they spend the most time.[248]

Figure 38. Share of Google DV360 Users Using Other Ad Buying Tools Among Ad Agency Respondents



Notes and Sources: Exhibit 89. Values sum to 100%. Displayed values are rounded to the nearest percent and may appear to sum to greater or less than 100 percent after rounding.

196. All respondents were asked whether they expected to use the same number, more, or fewer ad buying tools for programmatic display advertising next year for the client on which they spend the most time. Approximately 54 percent of respondents indicated that they expect to use the same number of ad buying tools for programmatic display next year, approximately 22 percent indicated that they expected to use more ad buying tools for programmatic display, and 22 percent indicated that they expected to use fewer ad buying tools for programmatic display.[249] When asked to explain (in an open-ended response) why they expected to use more ad buying

[248] Appendix J, at Exhibit 89.
[249] Exhibit 94.

tools next year, some respondents mentioned reasons relating to performance optimization (*e.g.*, Respondent 3348: "Based on experience, we wanna try new platforms for better performance"; Respondent 1676: "In order to optimize ad campaigns and evaluate the tool that delivers the best performance and ROI."), testing different tools (*e.g.*, Respondent 2743: "As more players come in the market we like to test and see who outperforms."), and specific features offered (*e.g.*, Respondent 2493: "Exploring tools that offer unique features, technologies, or partnerships that can enhance campaign capabilities."), among other reasons.[250] Respondents who indicated that they expected to use fewer ad buying tools next year also mentioned a variety of reasons, including wanting to consolidate or simplify (*e.g.*, Respondent 1801: "Consolidation leading to efficiency"; Respondent 2063: "Easier to use less") and focusing on tools that had better performance (*e.g.*, Respondent 1792: "we tested more programs over the past year and are consolidating to top performers"; Respondent 1791: "After testing tools against eachother [sic] and measuring results, we will cut tools that underperformed their competitors."), among other reasons.[251]

197. All respondents were asked in Q11 to identify, from a closed-ended list of options, which factors they consider when deciding to use a particular ad buying tool for programmatic display advertising for the client on which they spend the most time. The most popular responses included "Targeting criteria and capabilities" (47 percent of respondents), "Cost" (45 percent of respondents), and "Ad placement effectiveness" (45 percent of respondents).[252]

198. Respondents were also asked about their past decisions to start and/or stop using certain buying tools for the client on which they spend the most time. Approximately 31 percent of respondents indicated that they started using at least one ad buying tool for programmatic

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[250] Appendix H.3.
[251] Appendix H.3.
[252] Exhibit 95.

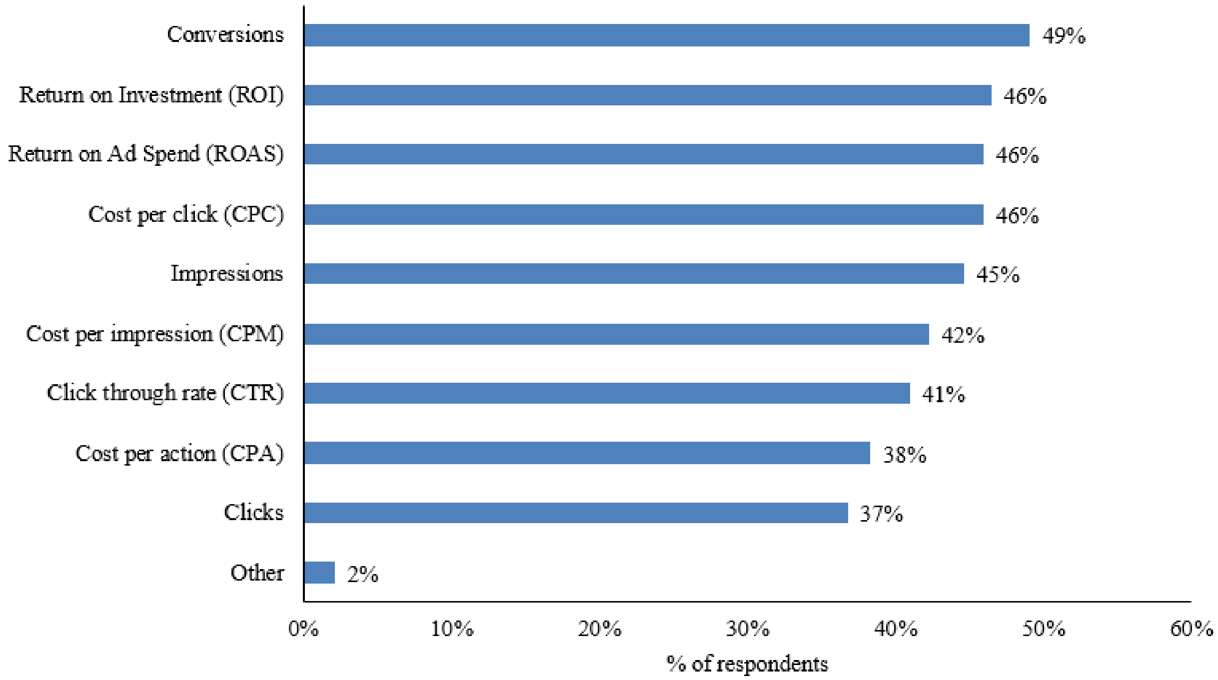
display in the past year.[253] In explaining this decision, some respondents mentioned reasons relating to performance optimization (*e.g.*, Respondent 1854: "Expectation of improved return on investment."; Respondent 2118: "better ROI") and specific features of the tool (*e.g.*, Respondent 1491: "Forecasting tools"; Respondent 2110: "Trying new features"), among other reasons.[254] Approximately 21 percent of respondents indicated that they stopped using at least one ad buying tool for programmatic display in the past year.[255] When asked to explain why, several respondents mentioned reasons relating to poor performance (*e.g.*, Respondent 1149: "Poor results"; Respondent 1407: "The ad buying tool we stopped using underperformed in terms of delivering the desired results, such as click-through rates, conversions, or return on ad spend.") or high costs (*e.g.*, Respondent 1378: "Mainly cost but also poor support"; Respondent 1321: "COST").[256]

Assessment of Programmatic Display Ad Performance

199. In Q16, the most popular metrics used to assess the performance of programmatic display ads for the client on which respondents spend the most time included "Conversions" (49 percent of respondents), "Return on Investment (ROI)" (46 percent of respondents), "Return on Ad Spend (ROAS)" (46 percent of respondents), and "Cost per Click" (46 percent of respondents).[257]

[253] Exhibit 97.
[254] Appendix H.3.
[255] Exhibit 96.
[256] Appendix H.3.
[257] Exhibit 98.

Figure 39. Share of Ad Agency Respondents Using Each Performance Metric



Notes and Sources: Exhibit 98.

200. Approximately 20 percent of respondents indicated that Return on Investment (ROI) was the most important metric for accurately assessing performance for the client on which they spend the most time and approximately 14 percent of respondents indicated that Return on Ad Spend (ROAS) was most important.[258] As shown in Figure 40, Return on Investment (ROI) and Return on Ad Spend (ROAS) were ranked as the most important metric by a greater share of respondents than any other metric.[259]

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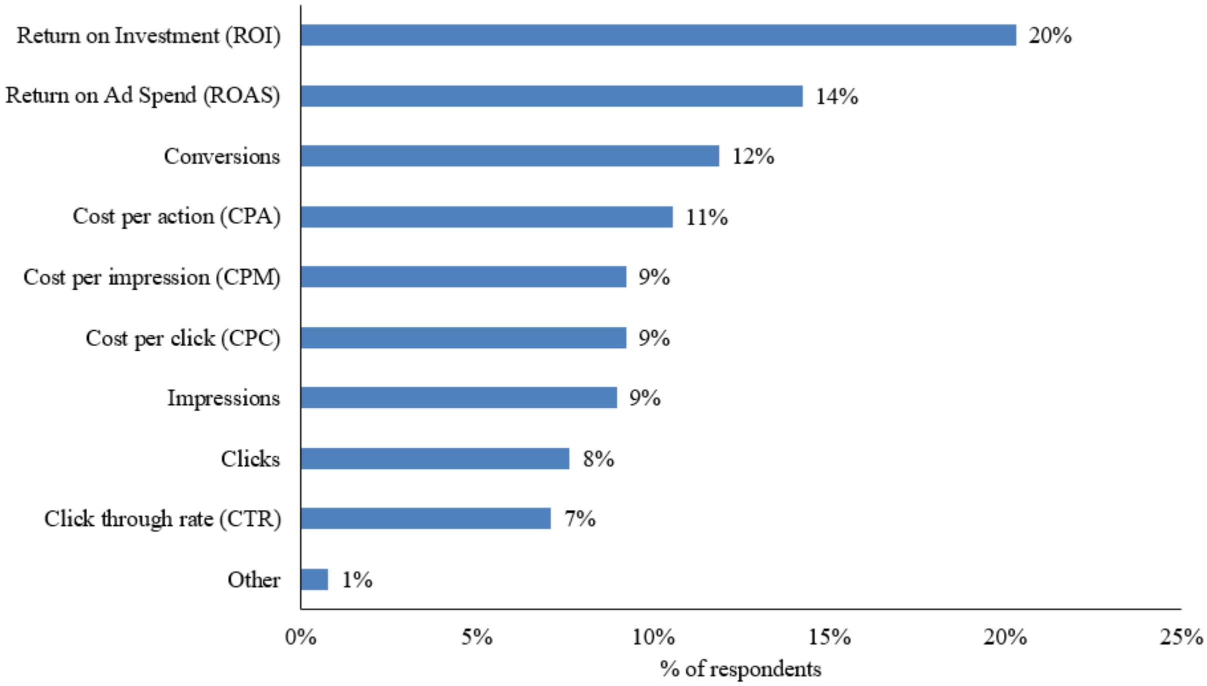
[258] Exhibit 99.
[259] Exhibit 99.

Figure 40. Share of Ad Agency Respondents Ranking Performance Metric Most Important



Notes and Sources: Exhibit 99. One respondent (less than 1 percent of respondents who used at least one metric to assess the performance of programmatic display ads) selected "Don't know / Unsure." Values sum to 100%. Displayed values are rounded to the nearest percent and may appear to sum to greater or less than 100 percent after rounding.

201. Approximately 82 percent of respondents indicated that they measure or assess performance of programmatic display advertising at least monthly for the client on which they spend the most time.[260]

202. Approximately 61 percent of respondents ran experiments on programmatic display ads in the past year for the client on which they spend the most time.[261] Among those respondents, approximately 64 percent ran experiments related to audiences, 58 percent ran experiments related to creatives, and 55 percent ran experiments related to ROI/ROAS.[262]

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[260] Exhibit 100. Specifically, approximately 9 percent of respondents indicated measuring performance daily, 39 percent indicated measuring performance weekly, and 34 percent indicated measuring performance monthly.
[261] Exhibit 101.
[262] Exhibit 102.

D. Key Implications of the Findings

203. Performance measurement: The results of the survey show that ad agency employees typically rely on multiple performance measures, including Return on Investment (ROI) and/or Return on Ad Spend (ROAS) (among other measures), which tend to be reviewed often. Based on these and other measures, ad agency employees can assess the relative effectiveness or ineffectiveness of the various advertising tools they use, including programmatic display, and potentially react to performance changes on behalf of clients.

204. Substitution: Using the performance feedback that they receive regarding costs and returns, ad agency employees can adjust their advertising spending allocation. To further examine the actions taken (or not taken) as a result of identifying a cost increase, respondents were presented with a hypothetical scenario involving a "small but significant" increase in the cost of programmatic display advertising, assuming that the costs associated with other digital advertising types remain the same. The results indicated that most ad agency employees (54 percent) would have diverted spending to other advertising types, including social, search, and digital video. Thus, the findings indicate that at least social, search, and digital video serve as substitutes for programmatic display advertising, and many ad agency employees would reallocate advertising spending if they determine that their programmatic display advertising is less cost effective than it previously was. In other words, the findings suggest that if the cost of programmatic display advertising increases, many ad agency employees will take action as a result, and the parties responsible for such cost increases will likely lose share to other advertising channels.

205. Multi-homing: The survey results also show that most ad agency employees use multiple digital advertising types and, within programmatic display advertising specifically, employ multiple ad buying tools. In particular, the survey results indicated that most ad agency

employees used multiple other types of digital advertising in addition to programmatic display for the client on which they spend the most time, with the most popular types being social, search, digital video, and email. In addition, the survey results showed that most ad agency employees (approximately 73 percent) used multiple ad buying tools for programmatic display advertising for the client on which they spend the most time.[263] The survey results also indicated that multi-homing is common for users of Google ad buying tools. Specifically, approximately 83 percent of Google Ads users use at least one other platform for display ads.[264]

206. Thus, the survey findings indicate that most ad agency employees use a variety of other digital advertising types and employ multiple ad buying tools for display advertising for the client on which they spend the most time, suggesting they have a variety of alternatives to Google ad buying tools. That is, ad agencies, by and large, already practice multi-homing, which facilitates flexible allocations and tool selection as desired.

207. Programmatic display spending: Consistent with the results of the Higher-Spend Advertiser and Lower-Spend Advertiser surveys, most ad agency employees indicated that programmatic display advertising accounts for a relatively small portion of digital advertising spending for the clients on which they spend the most time. Specifically, programmatic display accounts for an average share of approximately 31 percent and a median share of 20 percent of the overall digital advertising budget for the clients on which respondents spent the most time.[265]

208. Sophistication of ad agencies: The survey also informs us about the level of sophistication of most ad agencies. Similar to higher-spend advertisers, most ad agencies also conduct experiments to examine the effectiveness of advertising aspects such as the creatives,

[263] Exhibit 87.
[264] Exhibit 89. Approximately 79 percent of Google Ads users use at least one non-Google ad buying tool for programmatic display. Exhibit 89.
[265] Exhibit 80.

audiences, ROI/ROAS, bid strategies, and ad buying tool performance to further optimize their spending.

I. Simonson

Itamar Simonson, Ph.D.
July 30, 2024

EXHIBIT 1

HIGHER-SPEND ADVERTISER SURVEY
RESPONSE STATISTICS

	Status	#	%
[1]	**Invited to Complete Survey**	**4,978**	**100%**
[2]	**Clicked on Survey Link**	**2,348**	**100%**
[3]	**Screened Out of Survey**	**1,538**	**66%**
[4]	*CAPTCHA*	*13*	*1%*
[5]	*Age*	*9*	*0%*
[6]	*State*	*8*	*0%*
[7]	*Job Responsibilities*	*394*	*17%*
[8]	*Not Employed by a Advertiser/Marketer*	*678*	*29%*
[9]	*Annual Advertising Spend Less than $500K*	*230*	*10%*
[10]	*No Digital Advertising Spend*	*1*	*0%*
[11]	*Did Not Use Display Advertising*	*95*	*4%*
[12]	*Did Not Use Programmatic Display*	*57*	*2%*
[13]	*Not Involved in Decision Making Roles for Display Advertising*	*35*	*1%*
[14]	*Failed Attention Check*	*16*	*1%*
[15]	*Nonsensical Responses*	*2*	*0%*
[16]	*Overquota Respondents*	*-*	*0%*
[17]	**Self-Termination**	**207**	**9%**
[18]	**Completed the Survey**	**603**	**100%**
[19]	**Removed from Sample**	**101**	**17%**
[20]	*Slowpokes and Speeders*	*7*	*1%*
[21]	*Asked to be Excluded*	*94*	*16%*
[22]	**Analytical Sample**	**502**	**83%**

Notes & Sources:

From Higher-Spend Advertiser Survey.

[4] Respondents who failed the CAPTCHA three times were screened out of the study.

[5] Respondents who selected “Under 18” or “Prefer not to answer” in QS3 were screened out of the study.

[6] Respondents who selected “Other” or “Don’t know / Unsure” in QS5 were screened out of the study.

[7] Respondents who indicated in QS6 that, as part of their job responsibilities, they do not have any involvement with “Advertising or Marketing” were screened out of the study.

[8] Respondents who indicated in QS7 that they did not work for a “Advertiser/Marketer” were screened out of the study.

EXHIBIT 1

HIGHER-SPEND ADVERTISER SURVEY
RESPONSE STATISTICS

Notes & Sources (cont.):

[9] Respondents who indicated in QS10 that their company spent less than $500,000 on all advertising in the last 12 months or selected "Don't know / Unsure" were screened out of the study.

[10] Respondents who indicated in QS11 that the percentage of their total advertising budget spent on digital (online) advertising was zero were screened out of the study.

[11] Respondents who did not indicate in QS12 that they used display advertising in the past year were screened out of the study.

[12] Respondents who did not indicate in QS13 that their business unit/team used programmatic transaction methods to purchase display ad inventory, or selected "Don't know / Unsure" were screened out of the study.

[13] Respondents who selected "None of the above" or "Don't know / Unsure" in QS15 were screened out of the study.

[14] Respondents who did not select "Somewhat likely" in QS16 were screened out of the study.

[15] Removed by survey vendor from raw data for providing nonsensical responses to open-ended questions, such as "R5U54U" and "The study is quite nice to carry on."

[16] Respondents were terminated due to entering the survey after it had been closed for sampling.

[17] Respondents who only completed part of the survey.

[20] Respondents who took less than 100 seconds (1.67 minutes) or more than 10,800 seconds (3 hours) to complete the survey were removed from the analysis.

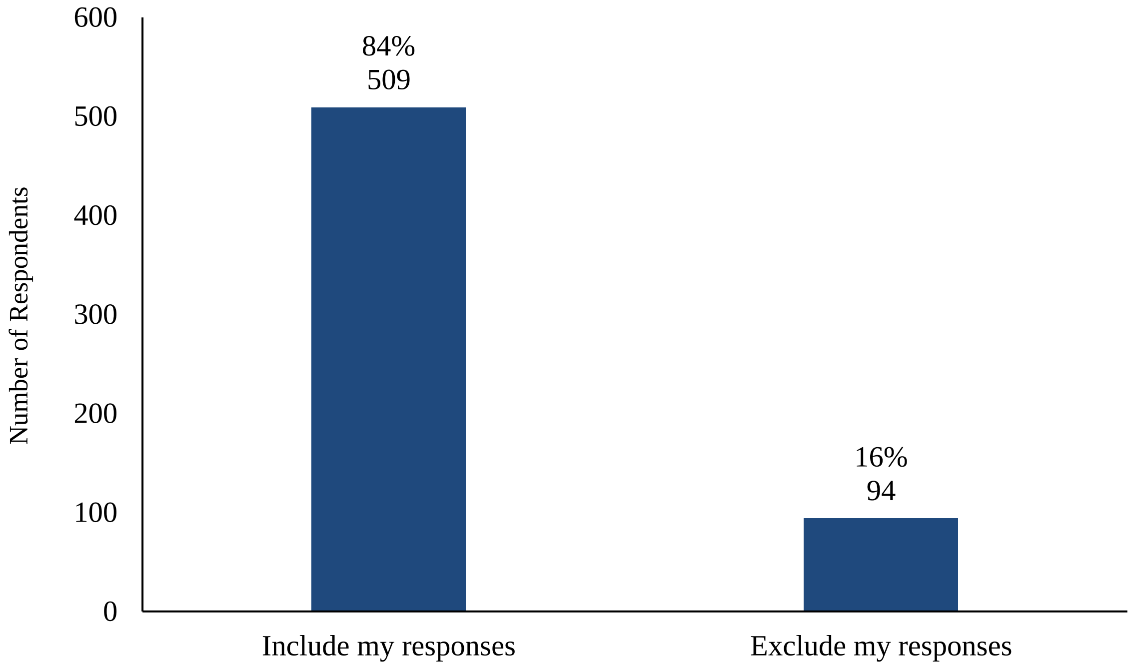
[21] Respondents were asked if they are willing to participate in this survey after completing the questionnaire. Respondents who selected "Exclude my responses" in QF1 were removed from the data by the panel vendor.

[22] These respondents were used in the analysis.

EXHIBIT 2

HIGHER-SPEND ADVERTISER SURVEY
SURVEY PARTICIPATION PREFERENCE

QF1: This survey is being conducted by consultants that have been retained on behalf of Google in connection with pending antitrust lawsuits in which the plaintiffs allege that Google engaged in anticompetitive conduct related to digital advertising. If you are willing to participate in this survey, please click "Include my responses" below. As a reminder, your responses will be kept anonymous and will be analyzed as part of a larger sample of responses. If you do not want to participate in this survey, please click "Exclude my responses" below.



Notes & Sources:
From Higher-Spend Advertiser Survey.
Includes respondents who completed the survey.
Respondents who indicated that they wanted their responses excluded from the survey were removed from the data by the panel vendor.

EXHIBIT 3

HIGHER-SPEND ADVERTISER SURVEY
RESPONDENT DEMOGRAPHICS

		#	%
		[A]	[B]
	Age		
[1]	18 - 34	100	20%
[2]	35 - 49	336	67%
[3]	50 - 64	66	13%
[4]	65 or above	-	0%
[5]	Total	502	100%
	Gender		
[6]	Female	135	27%
[7]	Male	367	73%
[8]	Other	-	0%
[9]	Prefer not to answer	-	0%
[10]	Total	502	100%

Source:
From Higher-Spend Advertiser Survey.

EXHIBIT 4

HIGHER-SPEND ADVERTISER SURVEY
MARKET SECTORS

QS8: Which of the following, if any, best characterizes the market sector/industry your company is in? (Please select only one option.)

		Total Respondents	
	Market Sector / Industry	#	%
	[A]	[B]	[C]
[1]	Advertising or Marketing	161	32%
[2]	Retail (including Ecommerce)	70	14%
[3]	B2B/Services for Businesses	47	9%
[4]	Apparel/Fashion	30	6%
[5]	Food and Beverage	26	5%
[6]	Media and Entertainment	24	5%
[7]	Financial Products/Services for Consumers (including Fintech)	24	5%
[8]	Consumer Electronics	16	3%
[9]	Travel and Hospitality	15	3%
[10]	Home Products/Appliances	14	3%
[11]	Health Care or Medical Services	13	3%
[12]	Health and Beauty Products	12	2%
[13]	Telecommunications	10	2%
[14]	Restaurants	9	2%
[15]	Automotive	6	1%
[16]	Pharmaceuticals and Remedies (Rx or OTC)	6	1%
[17]	Education	3	1%
[18]	Government	2	0%
[19]	Non-Profit	1	0%
[20]	Other	13	3%
[21]	Total	502	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for "Other."

EXHIBIT 5

HIGHER-SPEND ADVERTISER SURVEY
JOB TITLES

QS9: Which of the following best characterizes your current job title/level? (Please select only one option.)

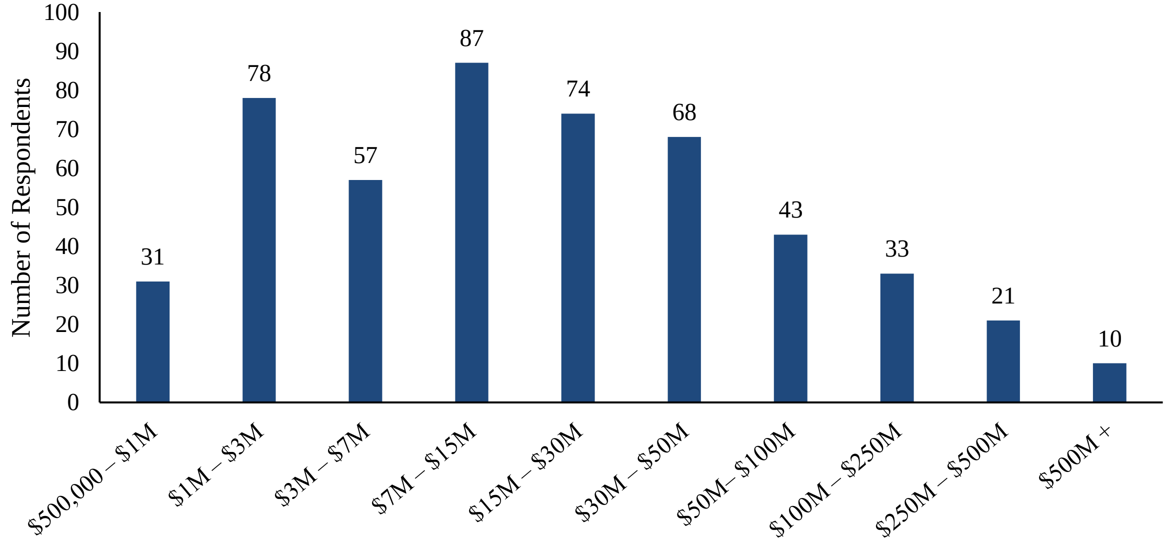
		Total Respondents	
	Job Title / Level	#	%
	[A]	[B]	[C]
[1]	Director	160	32%
[2]	C-Level (CEO, COO, CMO, etc.)	118	24%
[3]	Vice President, SVP, EVP, President, etc.	101	20%
[4]	Manager	72	14%
[5]	Supervisor/Department Head/Group Manager	33	7%
[6]	Strategist	10	2%
[7]	Planner	3	1%
[8]	Associate	2	0%
[9]	Analyst	2	0%
[10]	Buyer	1	0%
[11]	Other	-	0%
[12]	Total	502	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for "Other."

EXHIBIT 6

HIGHER-SPEND ADVERTISER SURVEY
ANNUAL AD SPEND

QS10: Approximately how much did your company spend in the last 12 months on all advertising, including all digital types (e.g., display, video, audio, social) plus all nondigital types (e.g., TV types, print, OOH, etc.)? (Please select only one option.)

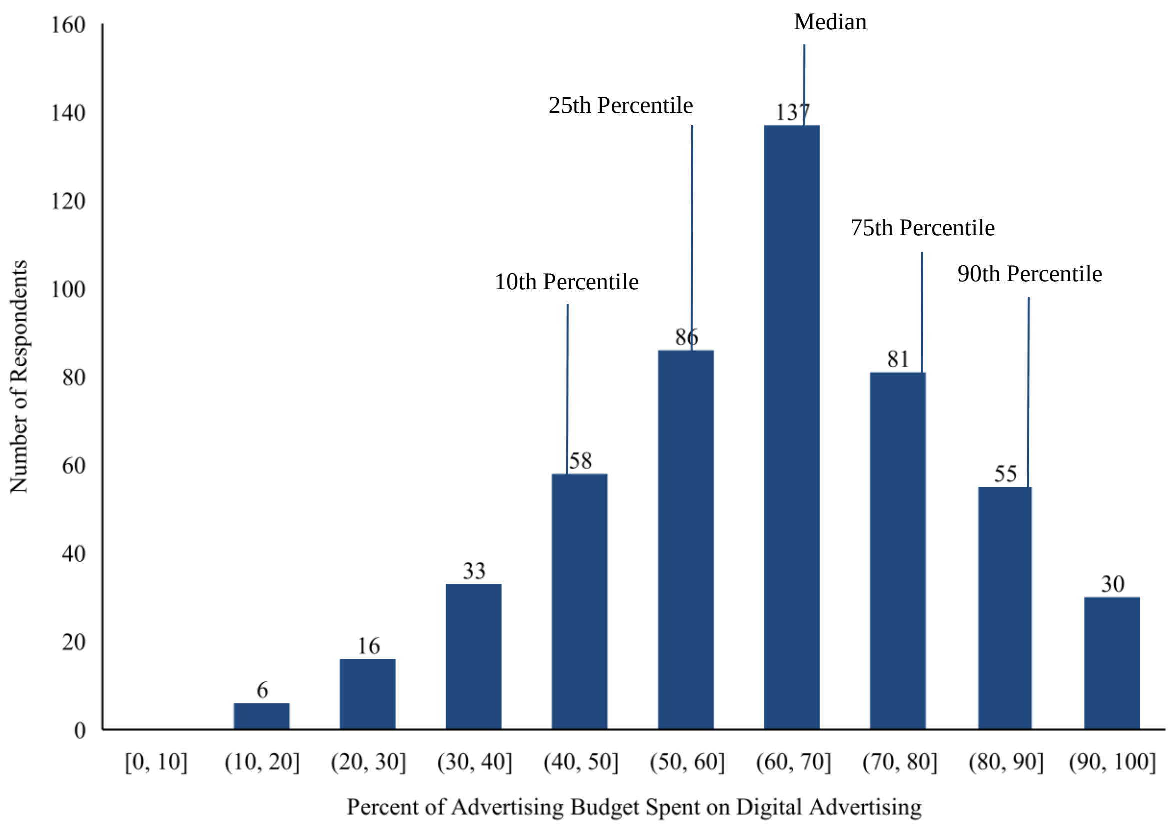


Notes & Sources:
From Higher-Spend Advertiser Survey.

EXHIBIT 7

HIGHER-SPEND ADVERTISER SURVEY
PERCENT OF BUDGET SPENT ON DIGITAL ADVERTISING

QS11: Please think about your business unit/team's total advertising budget. In the past year, what percentage of your business unit/team's total advertising budget was used for digital (online) advertising, as opposed to offline advertising? Please give your best estimate.



<u>Notes & Sources</u>:
From Higher-Spend Advertiser Survey.
Respondents who entered zero for digital (online) advertising were screened out of the survey.

EXHIBIT 8

HIGHER-SPEND ADVERTISER SURVEY
TYPES OF DIGITAL ADVERTISING USED

QS12: Which of the following types of digital advertising, if any, have you used in the past year? Please review the description of each advertising type carefully. (Please select all that apply.)

		Total Respondents	
	Advertising Type	#	%
	[A]	[B]	[C]
[1]	Display	502	100%
[2]	Social	381	76%
[3]	Search	377	75%
[4]	Digital Video	324	65%
[5]	Email	307	61%
[6]	eCommerce Platforms	274	55%
[7]	Connected TV	236	47%
[8]	App/In-App	222	44%
[9]	Digital Audio	205	41%
[10]	Other	2	0%
[11]	Total	502	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.
Respondents who did not select “Display” were screened out of the survey.
Percentages do not add up to 100% because respondents can select multiple options.
Sorted in descending order based on column [B], except for “Other.”

EXHIBIT 9

HIGHER-SPEND ADVERTISER SURVEY
NUMBER OF TYPES OF DIGITAL ADVERTISING USED

QS12: Which of the following types of digital advertising, if any, have you used in the past year? Please review the description of each advertising type carefully. (Please select all that apply.)

	Number of Types Selected	Total Respondents #	Total Respondents %
	[A]	[B]	[C]
[1]	1	75	15%
[2]	2	9	2%
[3]	3	17	3%
[4]	4	44	9%
[5]	5	69	14%
[6]	6	79	16%
[7]	7	66	13%
[8]	8	60	12%
[9]	9	81	16%
[10]	10	2	0%
[11]	Total	502	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.

EXHIBIT 10

HIGHER-SPEND ADVERTISER SURVEY
DISPLAY ADVERTISING TRANSACTION METHODS

QS13: Which of the following transaction methods has your business unit/team (or your ad agency) used to purchase display ad inventory in the past year? (Please select all that apply.)

		Total Respondents	
	Transaction Method	#	%
	[A]	[B]	[C]
[1]	Programmatic Only	206	41%
[2]	Programmatic and Direct Deals	296	59%
[3]	Total	502	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.
Respondents who selected “Direct Deals Only,” “None of the Above” or “Don’t know / Unsure” were screened out of the survey.

EXHIBIT 11

HIGHER-SPEND ADVERTISER SURVEY
SOCIAL MEDIA PLATFORMS USED

QS14: You indicated that your business unit/team has used social advertising in the past year. Which of the following social media platforms, if any, has your business unit/team advertised on in the past year? (Please select all that apply.)

		Total Respondents	
	Social Media Platform	#	%
	[A]	[B]	[C]
[1]	Facebook	336	88%
[2]	Instagram	301	79%
[3]	LinkedIn	255	67%
[4]	Twitter	218	57%
[5]	Tiktok	207	54%
[6]	Snapchat	133	35%
[7]	Pinterest	133	35%
[8]	Reddit	83	22%
[9]	Tumblr	15	4%
[10]	FriendLinx	7	2%
[11]	Other	5	1%
[12]	None of the Above	-	0%
[13]	Don’t know / Unsure	-	0%
[14]	Total Shown Question	381	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for “Other,” “None of the above,” and “Don’t know / Unsure.”
Percentages do not add up to 100% because respondents can select multiple options.
Respondents were only shown QS14 if they indicated in QS12 that their business unit/team had used social advertising in the past year.

EXHIBIT 12

HIGHER-SPEND ADVERTISER SURVEY
USE OF AD AGENCY

Q2: Do you or do you not use an ad agency for digital advertising?
(Please select only one option.)

	Response Options	#	%
	[A]	[B]	[C]
[1]	Yes, I use an ad agency for digital advertising	337	67%
[2]	No, I do not use an ad agency for digital advertising	160	32%
[3]	Don’t know / Unsure	5	1%
[4]	Total Shown Question	502	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.

EXHIBIT 13

HIGHER-SPEND ADVERTISER SURVEY
PURPOSE OF AD AGENCY USE

Q3: For which, if any, of the following do you use an ad agency? (Please select all that apply.)

	Response Options	Total Respondents #	Total Respondents %
	[A]	[B]	[C]
[1]	Media/marketing strategies	229	68%
[2]	Implementation of advertising (e.g., placing bids, interacting with DSPs)	212	63%
[3]	Tracking advertising performance	195	58%
[4]	Running advertising tests/experiments	177	53%
[5]	Content and/or creatives	173	51%
[6]	Allocating advertising funds across advertising types	144	43%
[7]	Customer research	131	39%
[8]	Consulting services	126	37%
[9]	Budgeting decisions	101	30%
[10]	Inventory access	89	26%
[11]	Other	-	0%
[12]	None of the above	-	0%
[13]	Don’t know / Unsure	-	0%
[14]	Total Shown Question	337	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for “Other,” “None of the above,” and “Don’t know / Unsure.”
Respondents were only shown Q3 if they indicated in Q2 that they used an ad agency for digital advertising.
Percentages do not add up to 100% because respondents can select multiple options.

EXHIBIT 14

HIGHER-SPEND ADVERTISER SURVEY
DIGITAL ADVERTISING BUDGET SHARE

Q4: What is your best estimate of the share of your business unit/team's digital advertising budget that was used for each of these types of advertising in the past year? Specifically, please allocate 100% across the different types of digital advertising shown below based on the share of your total digital advertising budget spent on each type. The total should add up to 100%.

	Advertising Type	# of Respondents	Mean	Median
	[A]	[B]	[C]	[D]
[1]	Programmatic Display	494	29%	15%
[2]	Social	374	13%	10%
[3]	Search	371	16%	10%
[4]	Digital Video	318	8%	5%
[5]	Email	301	6%	5%
[6]	Direct Deals Display	289	7%	5%
[7]	eCommerce Platforms	268	8%	5%
[8]	Connected TV	230	6%	0%
[9]	App/In-App	216	5%	0%
[10]	Digital Audio	200	4%	0%
[11]	Other	2	0%	0%
[12]	Don't know / Unsure	8	n/a	n/a
[13]	Total Shown Question	502		

Notes & Sources:
From Higher-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for "Other" and "Don't know / Unsure."
Respondents were shown their responses from QS12 and QS13. They were asked to allocate across all selected types.
Respondents can hover their mouse over each digital advertising type to review the type description.
[B] Shows number of respondents who allocated a budget for each advertising type.
[C]-[D] Budget allocated for an advertising type is assumed to be equal to 0 if respondents did not select the advertising type in QS12 or QS13.

EXHIBIT 15

HIGHER-SPEND ADVERTISER SURVEY
RESPONSE TO PROGRAMMATIC DISPLAY COST INCREASE

Q5: Now suppose that, based on your analysis, the cost of programmatic display advertising has recently increased by a small but significant amount, and will remain elevated for the foreseeable future. Assume further that, based on similar analyses for other digital advertising types, the costs of other digital advertising types have not changed and are not expected to change. So if the cost of programmatic display advertising increases (while the cost of other advertising types remains the same), will you or won't you divert some of your advertising spending for the coming year to other types of digital advertising?

	Response Options	#	%
	[A]	[B]	[C]
[1]	Will Divert Spending	295	59%
[2]	Will Not Divert Spending	179	36%
[3]	Don't know / Unsure	28	6%
[4]	Total Shown Question	502	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.

EXHIBIT 16

HIGHER-SPEND ADVERTISER SURVEY
ADVERTISING TYPES TO WHICH SPENDING WOULD BE DIVERTED
DUE TO PROGRAMMATIC DISPLAY COST INCREASE

Q6: To which other types of digital advertising below, if any, would you divert your advertising spending for the coming year as a result of the increase in the cost of programmatic display advertising?

	Advertising Type	Respondents Indicating They Would Divert Spending to the Advertising Type #	%
	[A]	[B]	[C]
[1]	Social	159	54%
[2]	Search	157	53%
[3]	Digital Video	125	42%
[4]	Direct Deals Display	102	35%
[5]	eCommerce Platforms	101	34%
[6]	Connected TV	99	34%
[7]	Email	95	32%
[8]	App/In-App	80	27%
[9]	Digital Audio	74	25%
[10]	Other	2	1%
[11]	None of the above	1	0%
[12]	Don’t know / Unsure	4	1%
[13]	Total Shown Question	295	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for “Other,” “None of the above,” and “Don’t know / Unsure.”
Respondents can hover their mouse over each digital advertising type to review the advertising type description.
Percentages do not add up to 100% because respondents can select multiple options.
Respondents were only shown Q6 if they indicated in Q5 that they would divert advertising spending to other types of digital advertising.

EXHIBIT 17

HIGHER-SPEND ADVERTISER SURVEY
NUMBER OF ADVERTISING TYPES TO WHICH SPENDING WOULD BE DIVERTED DUE TO PROGRAMMATIC DISPLAY COST INCREASE

Q6: To which other types of digital advertising below, if any, would you divert your advertising spending for the coming year for the client you spend the most time on, as a result of the increase in the cost of programmatic display advertising?

	Number of Advertising Types Diverted Spending To	Respondents Indicating They Would Divert Spending to the Number of Advertising Types	
		#	%
	[A]	[B]	[C]
[1]	0	1	0%
[2]	1	31	11%
[3]	2	80	27%
[4]	3	73	25%
[5]	4	33	11%
[6]	5	36	12%
[7]	6	16	5%
[8]	7	5	2%
[9]	8	3	1%
[10]	9	13	4%
[11]	10	-	0%
[12]	Don’t know / Unsure	4	1%
[13]	Total Shown Question	295	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.
Respondents were only shown Q6 if they indicated in Q5 that they would divert advertising spending to other types of digital advertising.
Respondents can hover their mouse over each digital advertising type to review the advertising type description.

EXHIBIT 18

HIGHER-SPEND ADVERTISER SURVEY
EXTENT OF SPENDING CHANGES AS A RESULT OF PROGRAMMATIC DISPLAY COST INCREASE

Q7: In your previous answer, you indicated that the increase in the cost of programmatic display advertising will lead you to divert some of your advertising spending to the types of digital advertising listed below. Please use the sliders below to indicate, on a scale of 0 to 10, the extent to which you would divert (that is, increase) advertising spending for the coming year to each type of digital advertising that you just indicated. For each digital advertising type below, please select 0 if you expect to keep spending on that type of digital advertising for the coming year and 10 if you expect to substantially increase spending on that type of digital advertising.

	Advertising Type	Total Respondents	Average Extent of Increase	Number of Respondents by Extent of Increase											Don't know / Unsure
				0	1	2	3	4	5	6	7	8	9	10	
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]
[1]	Social	159	6.6	-	1	4	17	10	18	15	33	25	24	11	1
[2]	Search	157	6.8	-	2	4	5	13	15	18	32	35	24	8	1
[3]	Digital Video	125	6.8	1	-	5	10	6	13	15	17	24	22	12	-
[4]	Direct Deals Display	102	7.1	-	1	3	8	-	6	11	24	19	18	10	2
[5]	eCommerce Platforms	101	7.9	-	-	-	3	1	3	7	19	26	24	16	2
[6]	Connected TV	99	6.9	-	3	3	6	4	8	15	12	20	14	13	1
[7]	Email	95	6.9	2	2	3	4	3	5	11	21	19	16	9	-
[8]	App/In-App	80	7.7	-	-	1	1	3	1	8	17	24	14	11	-
[9]	Digital Audio	74	7.2	-	3	1	3	2	8	8	2	22	18	7	-
[10]	Other	2	4.5	-	-	-	1	-	-	1	-	-	-	-	-

	Advertising Type	Total Respondents	Average Extent of Increase	Share of Respondents by Extent of Increase											Don't know / Unsure
				0	1	2	3	4	5	6	7	8	9	10	
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]
[1]	Social	100%	n/a	0%	1%	3%	11%	6%	11%	9%	21%	16%	15%	7%	1%
[2]	Search	100%	n/a	0%	1%	3%	3%	8%	10%	11%	20%	22%	15%	5%	1%
[3]	Digital Video	100%	n/a	1%	0%	4%	8%	5%	10%	12%	14%	19%	18%	10%	0%
[4]	Connected TV	100%	n/a	0%	1%	3%	8%	0%	6%	11%	24%	19%	18%	10%	2%
[5]	Direct Deals Display	100%	n/a	0%	0%	0%	3%	1%	3%	7%	19%	26%	24%	16%	2%
[6]	Email	100%	n/a	0%	3%	3%	6%	4%	8%	15%	12%	20%	14%	13%	1%
[7]	Digital Audio	100%	n/a	2%	2%	3%	4%	3%	5%	12%	22%	20%	17%	9%	0%
[8]	eCommerce Platforms	100%	n/a	0%	0%	1%	1%	4%	1%	10%	21%	30%	18%	14%	0%
[9]	App/In-App	100%	n/a	0%	4%	1%	4%	3%	11%	11%	3%	30%	24%	9%	0%
[10]	Other	100%	n/a	0%	0%	0%	50%	0%	0%	50%	0%	0%	0%	0%	0%

EXHIBIT 18

HIGHER-SPEND ADVERTISER SURVEY
EXTENT OF SPENDING CHANGES AS A RESULT OF PROGRAMMATIC DISPLAY COST INCREASE

Notes & Sources:
From Higher-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for "Other."
Respondents were shown their answer choices from Q6.
Respondents were only shown Q7 if they did not select "None of the above" or "Don't know/Unsure" in Q6.
Respondents can hover their mouse over each digital advertising type to review the type description.
Percentages calculated by dividing the number of people choosing the extent of increase for an advertising type by the total number of people selecting the advertising type to which to divert spending.
[C] Calculated as the average extent of increase in [D] through [N], weighted by the number of respondents.

EXHIBIT 19

HIGHER-SPEND ADVERTISER SURVEY
EXTENT OF SPENDING CHANGES AS A RESULT OF PROGRAMMATIC DISPLAY COST INCREASE

Q7: In your previous answer, you indicated that the increase in the cost of programmatic display advertising will lead you to divert some of your advertising spending to the types of digital advertising listed below. Please use the sliders below to indicate, on a scale of 0 to 10, the extent to which you would divert (that is, increase) advertising spending for the coming year to each type of digital advertising that you just indicated. For each digital advertising type below, please select 0 if you expect to keep spending on that type of digital advertising for the coming year and 10 if you expect to substantially increase spending on that type of digital advertising.

		Total	Number of Respondents by Extent of Increase			Don't know
	Advertising Type	Respondents	0 – 3	4 – 6	7 – 10	/ Unsure
	[A]	[B]	[C]	[D]	[E]	[F]
[1]	Social	159	22	43	93	1
[2]	Search	157	11	46	99	1
[3]	Digital Video	125	16	34	75	-
[4]	Direct Deals Display	102	12	17	71	2
[5]	eCommerce Platforms	101	3	11	85	2
[6]	Connected TV	99	12	27	59	1
[7]	Email	95	11	19	65	-
[8]	App/In-App	80	2	12	66	-
[9]	Digital Audio	74	7	18	49	-
[10]	Other	2	1	1	-	-

		Total	Share of Respondents by Extent of Increase			Don't know
	Advertising Type	Respondents	0 – 3	4 – 6	7 – 10	/ Unsure
	[A]	[B]	[C]	[D]	[E]	[F]
[1]	Social	100%	14%	27%	58%	1%
[2]	Search	100%	7%	29%	63%	1%
[3]	Digital Video	100%	13%	27%	60%	0%
[4]	Direct Deals Display	100%	12%	17%	70%	2%
[5]	eCommerce Platforms	100%	3%	11%	84%	2%
[6]	Connected TV	100%	12%	27%	60%	1%
[7]	Email	100%	12%	20%	68%	0%
[8]	App/In-App	100%	3%	15%	83%	0%
[9]	Digital Audio	100%	9%	24%	66%	0%
[10]	Other	100%	50%	50%	0%	0%

EXHIBIT 19

HIGHER-SPEND ADVERTISER SURVEY
EXTENT OF SPENDING CHANGES AS A RESULT OF PROGRAMMATIC DISPLAY COST INCREASE

Notes & Sources:
From Higher-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for "Other."
Respondents were shown their answer choices from Q6.
Respondents were only shown Q7 if they did not select "None of the above" or "Don't know/Unsure" in Q6.
Respondents can hover their mouse over each digital advertising type to review the type description.
Percentages calculated by dividing the number of people choosing the extent of increase for an advertising type by the total number of people selecting the advertising type to which to divert spending.

EXHIBIT 20

HIGHER-SPEND ADVERTISER SURVEY
AD BUYING TOOLS USED IN PAST YEAR

Q8: An ad buying tool is a programmatic advertising platform that allows advertisers and media buying agencies to bid automatically on display ad inventory from a wide range of publishers. Some ad buying tools can also be used to buy video and search ad inventory. Ad buying tools include demand side platforms, or "DSPs." Which of the following ad buying tools, if any, have you and/or your business unit/team used during the past year for programmatic display advertising?

		Total Respondents		$500K – $15M Ad Spend		> Than $15M Ad Spend	
	Ad Buying Tool	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Google Ads	330	66%	169	67%	161	65%
[2]	Google DV360	213	42%	110	43%	103	41%
[3]	Amazon DSP	180	36%	86	34%	94	38%
[4]	Adobe Advertising Cloud	118	24%	51	20%	67	27%
[5]	The Trade Desk DSP	102	20%	37	15%	65	26%
[6]	Yahoo DSP (formerly Verizon Media DSP)	76	15%	30	12%	46	18%
[7]	Criteo	61	12%	20	8%	41	16%
[8]	Taboola	46	9%	20	8%	26	10%
[9]	MediaMath DSP	43	9%	11	4%	32	13%
[10]	Adform	41	8%	14	6%	27	11%
[11]	Xandr Invest	37	7%	13	5%	24	10%
[12]	Outbrain	36	7%	13	5%	23	9%
[13]	StackAdapt	36	7%	20	8%	16	6%
[14]	Amobee	34	7%	7	3%	27	11%
[15]	Quantcast	34	7%	13	5%	21	8%
[16]	Simpli.fi	34	7%	9	4%	25	10%
[17]	Zeta Global	32	6%	5	2%	27	11%
[18]	Ad Step Technologies	30	6%	5	2%	25	10%
[19]	Basis by Centro	26	5%	11	4%	15	6%
[20]	Illumin (formerly AcuityAds)	24	5%	9	4%	15	6%
[21]	Adelphic	21	4%	8	3%	13	5%
[22]	Quorexx	21	4%	5	2%	16	6%
[23]	Beeswax	14	3%	5	2%	9	4%
[24]	Other	10	2%	7	3%	3	1%
[25]	Don't know / Unsure	5	1%	1	0%	4	2%
[26]	Total Shown Question	502	100%	253	100%	249	100%

EXHIBIT 20

HIGHER-SPEND ADVERTISER SURVEY
AD BUYING TOOLS USED IN PAST YEAR

Notes & Sources:
From Higher-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for “Other” and “Don’t know / Unsure.”
Respondents with annual ad spend of less than $500K or who selected “Don’t know / Unsure” in QS10 were screened out of the survey.
Percentages do not add up to 100% because respondents can select multiple options.

EXHIBIT 21

HIGHER-SPEND ADVERTISER SURVEY
NUMBER OF AD BUYING TOOLS USED IN PAST YEAR

Q8: An ad buying tool is a programmatic advertising platform that allows advertisers and media buying agencies to bid automatically on display ad inventory from a wide range of publishers. Some ad buying tools can also be used to buy video and search ad inventory. Ad buying tools include demand side platforms, or “DSPs.” Which of the following ad buying tools, if any, have you and/or your business unit/team used during the past year for programmatic display advertising?

	Number of Ad Buying Tools Selected	Total Respondents		$500K – $15M Ad Spend		> Than $15M Ad Spend	
		#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Zero	3	1%	1	0%	2	1%
[2]	One	118	24%	76	30%	42	17%
[3]	More Than One	376	75%	175	69%	201	81%
[4]	Two	136	27%	68	27%	68	27%
[5]	Three	91	18%	50	20%	41	16%
[6]	Four or More	149	30%	57	23%	92	37%
[7]	Don’t know / Unsure	5	1%	1	0%	4	2%
[8]	Total Shown Question	502	100%	253	100%	249	100%
[9]	Average # of Ad Buying Tools Selected	3.1		2.7		3.6	

Notes & Sources:

From Higher-Spend Advertiser Survey.

Respondents with annual ad spend of less than $500K or who selected “Don’t know / Unsure” in QS10 were screened out of the survey.

[A] Count excludes Quorexx and Ad Step Technologies, which were decoy answer options.

[9] Calculated as the average number of ad buying tools selected by respondents. Excludes respondents who selected “Don’t know / Unsure.”

EXHIBIT 22

HIGHER-SPEND ADVERTISER SURVEY
USE OF GOOGLE AD BUYING TOOLS

Q8: An ad buying tool is a programmatic advertising platform that allows advertisers and media buying agencies to automatically on display ad inventory from a wide range of publishers. Some ad buying tools can also be used to buy video and search ad inventory. Ad buying tools include demand side platforms, or “DSPs.” Which of the following ad buying tools, if any, have you and/or your business unit/team used during the past year for programmatic display advertising?

		Total Respondents		$500K – $15M Ad Spend		> Than $15M Ad Spend	
	Ad Buying Tool(s)	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Neither Google Ads nor Google DV360	120	24%	60	24%	60	24%
[2]	At least one of Google Ads and Google DV360	377	75%	192	76%	185	74%
[3]	Google Ads Only	164	33%	82	32%	82	33%
[4]	Google DV360 Only	47	9%	23	9%	24	10%
[5]	Both Google Ads and Google DV360	166	33%	87	34%	79	32%
[6]	Don’t know / Unsure	5	1%	1	0%	4	2%
[7]	Total Shown Question	502	100%	253	100%	249	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.
Respondents with annual ad spend of less than $500K or who selected “Don’t know / Unsure” in QS10 were screened out of the survey.

EXHIBIT 23

HIGHER-SPEND ADVERTISER SURVEY
GOOGLE USERS
NUMBER OF OTHER AD BUYING TOOLS

Q8: An ad buying tool is a programmatic advertising platform that allows advertisers and media buying agencies to bid automatically on display ad inventory from a wide range of publishers. Some ad buying tools can also be used to buy video and search ad inventory. Ad buying tools include demand side platforms, or "DSPs." Which of the following ad buying tools, if any, have you and/or your business unit/team used during the past year for programmatic display advertising?

		Google Ads Users			Google DV360 Users		
	# of Other Ad Buying Tools (Incl. Google Tools)	Total Respondents	$500K – $15M Ad Spend	> Than $15M Ad Spend	Total Respondents	$500K – $15M Ad Spend	> Than $15M Ad Spend
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	0	43	25	18	15	10	5
[2]	1	99	56	43	47	27	20
[3]	2	68	38	30	43	28	15
[4]	3	43	17	26	36	15	21
[5]	4+	77	33	44	72	30	42
[6]	Total Respondents	330	169	161	213	110	103
[7]	Average # of Other Ad Buying Tools	2.5	2.1	3.0	3.2	2.6	3.9

		Google Ads Users			Google DV360 Users		
	# of Other Ad Buying Tools (Incl. Google Tools)	Total Respondents	$500K – $15M Ad Spend	> Than $15M Ad Spend	Total Respondents	$500K – $15M Ad Spend	> Than $15M Ad Spend
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[8]	0	13%	15%	11%	7%	9%	5%
[9]	1	30%	33%	27%	22%	25%	19%
[10]	2	21%	22%	19%	20%	25%	15%
[11]	3	13%	10%	16%	17%	14%	20%
[12]	4+	23%	20%	27%	34%	27%	41%
[13]	Total Respondents	100%	100%	100%	100%	100%	100%

EXHIBIT 23

HIGHER-SPEND ADVERTISER SURVEY
GOOGLE USERS
NUMBER OF OTHER AD BUYING TOOLS

Q8: An ad buying tool is a programmatic advertising platform that allows advertisers and media buying agencies to bid automatically on display ad inventory from a wide range of publishers. Some ad buying tools can also be used to buy video and search ad inventory. Ad buying tools include demand side platforms, or "DSPs." Which of the following ad buying tools, if any, have you and/or your business unit/team used during the past year for programmatic display advertising?

		Google Ads Users			Google DV360 Users		
	# of Non-Google Ad Buying Tools	Total Respondents	$500K – $15M Ad Spend	> Than $15M Ad Spend	Total Respondents	$500K – $15M Ad Spend	> Than $15M Ad Spend
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[14]	0	78	47	31	50	32	18
[15]	1	99	56	43	47	27	20
[16]	2	66	31	35	41	21	20
[17]	3	38	20	18	31	18	13
[18]	4+	49	15	34	44	12	32
[19]	Total Respondents	330	169	161	213	110	103
[20]	Average # of Non-Google Ad Buying Tools	2.0	1.6	2.5	2.4	1.8	3.1

		Google Ads Users			Google DV360 Users		
	# of Non-Google Ad Buying Tools	Total Respondents	$500K – $15M Ad Spend	> Than $15M Ad Spend	Total Respondents	$500K – $15M Ad Spend	> Than $15M Ad Spend
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[21]	0	24%	28%	19%	23%	29%	17%
[22]	1	30%	33%	27%	22%	25%	19%
[23]	2	20%	18%	22%	19%	19%	19%
[24]	3	12%	12%	11%	15%	16%	13%
[25]	4+	15%	9%	21%	21%	11%	31%
[26]	Total Respondents	100%	100%	100%	100%	100%	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.
Respondents with annual ad spend of less than $500K or who selected "Don't know / Unsure" in QS10 were screened out of the survey.
[A] Count excludes Quorexx and Ad Step Technologies, which were decoy answer options.
Percentages calculated by dividing the number of people choosing "Google Ads" or "Google DV360" for a given number of selected ad buying tools by the total number of people choosing "Google Ads" or "Google DV360."

EXHIBIT 24

HIGHER-SPEND ADVERTISER SURVEY
USE OF GOOGLE ADS AND OTHER AD BUYING TOOLS

Q8: An ad buying tool is a programmatic advertising platform that allows advertisers and media buying agencies to bid automatically on display ad inventory from a wide range of publishers. Some ad buying tools can also be used to buy video and search ad inventory. Ad buying tools include demand side platforms, or "DSPs." Which of the following ad buying tools, if any, have you and/or your business unit/team used during the past year for programmatic display advertising?

	Ad Buying Tool(s)	Total Respondents #	Total Respondents %
	[A]	[B]	[C]
[1]	Google Ads and At Least One Other Ad Buying Tool	287	87%
[2]	*Google Ads and DV360 Only*	*35*	*11%*
[3]	*Google Ads, DV360 and At Least One Non-Google Ad Buying Tool*	*131*	*40%*
[4]	*Google Ads Only and At Least One Non-Google Ad Buying Tool*	*121*	*37%*
[5]	Google Ads and No Other Ad Buying Tool	43	13%
[6]	Total Respondents Using Google Ads	330	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.
Limited to respondents who selected Google Ads in Q8.

EXHIBIT 25

HIGHER-SPEND ADVERTISER SURVEY
OTHER DIGITAL ADVERTISING TYPES USED BY RESPONDENTS WHO USE ONLY GOOGLE ADS FOR PROGRAMMATIC DISPLAY

QS12: Which of the following types of digital advertising, if any, have you used in the past year? Please review the description of each advertising type carefully. (Please select all that apply.)

		Respondents Who Use Google Ads and No Other Ad Buying Tools for Programmatic Display		Respondents Who Use Google Ads and No Other Non-Google Ad Buying Tools for Programmatic Display	
	Other Digital Advertising Types Used	#	%	#	%
	[A]	[B]	[C]	[D]	[E]
[1]	Social	19	44%	51	65%
[2]	Search	19	44%	53	68%
[3]	Email	19	44%	45	58%
[4]	Digital Video	13	30%	39	50%
[5]	Direct Display	12	28%	31	40%
[6]	eCommerce Platforms	10	23%	26	33%
[7]	App/In-App	10	23%	22	28%
[8]	Connected TV	2	5%	19	24%
[9]	Digital Audio	2	5%	19	24%
[10]	Other	-	-	-	-
[11]	Total	43	100%	78	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for "Other."
[A] Includes the non-programmatic display advertising types respondents selected in QS12 and QS13.
[B]-[C] Limited to respondents who selected Google Ads and no other buying tools (including Google DV360) in Q8. Includes 2 respondents who selected Google Ads and one of the decoy ad buying tools, Ad Step Technologies and Quorexx.
[D]-[E] Limited to respondents who selected Google Ads and no other Non-Google ad buying tool in Q8. Includes 3 respondents who selected Google Ads and one of the decoy ad buying tools, Ad Step Technologies and Quorexx.

EXHIBIT 26

HIGHER-SPEND ADVERTISER SURVEY
NUMBER OF OTHER DIGITAL ADVERTISING TYPES USED BY RESPONDENTS WHO USE ONLY GOOGLE ADS FOR PROGRAMMATIC DISPLAY

QS12: Which of the following types of digital advertising, if any, have you used in the past year? Please review the description of each advertising type carefully. (Please select all that apply.)

	Number of Other Display Advertising Types Used	Respondents Who Use Google Ads and No Other Ad Buying Tools for Programmatic Display		Respondents Who Use Google Ads and No Other Non-Google Ad Buying Tools for Programmatic Display	
		#	%	#	%
	[A]	[B]	[C]	[D]	[E]
[1]	0	19	44%	20	26%
[2]	1	2	5%	3	4%
[3]	2	1	2%	1	1%
[4]	3	5	12%	8	10%
[5]	4	4	9%	6	8%
[6]	5	6	14%	14	18%
[7]	6	2	5%	10	13%
[8]	7	3	7%	10	13%
[9]	8	1	2%	2	3%
[10]	9	-	0%	4	5%
[11]	Total	43	100%	78	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.
[A] Counts the number of non-programmatic display advertising types respondents selected in QS12 and QS13.
[B]-[C] Limited to respondents who selected Google Ads and no other buying tools (including Google DV360) in Q8. Includes 2 respondents who selected Google Ads and one of the decoy ad buying tools, Ad Step Technologies and Quorexx.
[D]-[E] Limited to respondents who selected Google Ads and no other Non-Google ad buying tool in Q8. Includes 3 respondents who selected Google Ads and one of the decoy ad buying tools, Ad Step Technologies and Quorexx.

EXHIBIT 27

HIGHER-SPEND ADVERTISER SURVEY
PROGRAMMATIC DISPLAY ADVERTISING BUDGET SHARE
BY RESPONDENTS WHO USE ONLY GOOGLE ADS FOR PROGRAMMATIC DISPLAY

Q4: What is your best estimate of the share of your business unit/team's digital advertising budget that was used for each of these types of advertising in the past year? Specifically, please allocate 100% across the different types of digital advertising shown below based on the share of your total digital advertising budget spent on each type. The total should add up to 100%.

	% of Budget Allocated to Programmatic Display Advertising	Respondents Who Use Google Ads and No Other Ad Buying Tools for Programmatic Display		Respondents Who Use Google Ads and No Other Non-Google Ad Buying Tools for Programmatic Display	
		#	%	#	%
	[A]	[B]	[C]	[D]	[E]
	% of Digital Advertising Budget				
[1]	0% – 10%	11	26%	25	32%
[2]	10% – 20%	6	14%	17	22%
[3]	20% – 30%	3	7%	11	14%
[4]	30% – 40%	2	5%	3	4%
[5]	40% – 50%	1	2%	1	1%
[6]	50% – 60%	1	2%	1	1%
[7]	60% – 70%	-	0%	-	0%
[8]	70% – 80%	-	0%	-	0%
[9]	80% – 90%	-	0%	-	0%
[10]	90% – 100%	19	44%	20	26%
[11]	Total	43	100%	78	100%
	% of Overall Advertising Budget				
[12]	0% – 10%	15	35%	34	44%
[13]	10% – 20%	4	9%	15	19%
[14]	20% – 30%	1	2%	4	5%
[15]	30% – 40%	4	9%	5	6%
[16]	40% – 50%	7	16%	7	9%
[17]	50% – 60%	4	9%	4	5%
[18]	60% – 70%	4	9%	4	5%
[19]	70% – 80%	4	9%	5	6%
[20]	80% – 90%	-	0%	-	0%
[21]	90% – 100%	-	0%	-	0%
[22]	Total	43	100%	78	100%

EXHIBIT 27

HIGHER-SPEND ADVERTISER SURVEY
PROGRAMMATIC DISPLAY ADVERTISING BUDGET SHARE
BY RESPONDENTS WHO USE ONLY GOOGLE ADS FOR PROGRAMMATIC DISPLAY

Notes & Sources:
From Higher-Spend Advertiser Survey.
[B]-[C] Limited to respondents who selected Google Ads and no other ad buying tools (including Google DV360) in Q8. Includes 2 respondents who selected Google Ads and one of the decoy ad buying tools, Ad Step Technologies and Quorexx.
[D]-[E] Limited to respondents who selected Google Ads and no other Non-Google ad buying tool in Q7. Includes 3 respondents who selected Google Ads and one of the decoy ad buying tools, Ad Step Technologies and Quorexx.
[12]-[21] Calculated as the % of budget allocated to programmatic display in Q4 * the % of budget allocated to online advertising in QS11.

EXHIBIT 28

HIGHER-SPEND ADVERTISER SURVEY
CHANGE IN AD BUYING TOOL USE

Q10: Do you and/or your business unit/team expect to use the same number, more, or fewer ad buying tools for programmatic display advertising next year? (Please select only one option.)

	Response Options	#	%
	[A]	[B]	[C]
[1]	More	118	24%
[2]	Fewer	84	17%
[3]	Same Number	278	56%
[4]	Don’t know / Unsure	17	3%
[5]	Total Shown Question	497	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.
Respondents were shown Q10 if they did not select “Don’t know / Unsure” in Q8.

EXHIBIT 29

HIGHER-SPEND ADVERTISER SURVEY
FACTORS CONSIDERED WHEN CHOOSING AD BUYING TOOLS
FOR PROGRAMMATIC DISPLAY ADVERTISING

Q12: Which of the following factors, if any, do you and/or your business unit/team consider when deciding to use a particular ad buying tool for programmatic display advertising? (Please select all that apply.)

		Respondents Indicating the Factor was Considered	
	Factor	#	%
	[A]	[B]	[C]
[1]	Ad placement effectiveness	239	48%
[2]	Targeting criteria and capabilities	233	47%
[3]	Audience scale/Reach	225	45%
[4]	Media optimization of placements during a campaign	222	45%
[5]	Cost	221	44%
[6]	Ease of use/User interface	186	37%
[7]	Reporting features	172	35%
[8]	Brand safety/fraud protection	162	33%
[9]	API and integrations	153	31%
[10]	Budget management tools	144	29%
[11]	Forecasting tools	119	24%
[12]	Support	117	24%
[13]	Troubleshooting capabilities	99	20%
[14]	Identity management	96	19%
[15]	Other	4	1%
[16]	Don’t know / Unsure	2	0%
[17]	Total Shown Question	497	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for “Other” and “Don’t know / Unsure.”
Respondents were shown Q12 if they did not select “Don’t know / Unsure” in Q8.
Percentages do not add up to 100% because respondents can select multiple options.

EXHIBIT 30

HIGHER-SPEND ADVERTISER SURVEY
DISCONTINUATION OF AD BUYING TOOL USE

Q13: Have you and/or your business unit/team stopped using any ad buying tool(s) for programmatic display advertising in the past year? (Please select only one option.)

	Response Options	#	%
	[A]	[B]	[C]
[1]	Yes	113	23%
[2]	No	350	70%
[3]	Don’t know / Unsure	34	7%
[4]	Total Shown Question	497	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.
Respondents were shown Q13 if they did not select “Don’t know / Unsure” in Q8.

EXHIBIT 31

HIGHER-SPEND ADVERTISER SURVEY
START OF AD BUYING TOOL USE

Q15: Have you and/or your business unit/team started using any ad buying tool(s) for programmatic display advertising in the past year? (Please select only one option.)

	Response Options	#	%
	[A]	[B]	[C]
[1]	Yes	198	40%
[2]	No	257	52%
[3]	Don’t know / Unsure	42	8%
[4]	Total Shown Question	497	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.
Respondents were shown Q15 if they did not select “Don’t know / Unsure” in Q8.

EXHIBIT 32

HIGHER-SPEND ADVERTISER SURVEY
PERFORMANCE ASSESSMENT METRICS

Q17: Which of the following metrics, if any, are you and/or your business unit/team using to assess the performance of programmatic display ads, direct deals display ads, social media ads, and/or digital video ads? (Please select all that apply in each column.)

		Programmatic Display Ads		Direct Deals Display Ads		Social Media Ads		Digital Video Ads	
	Metric	#	%	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]
[1]	Conversions	241	48%	116	39%	183	48%	135	42%
[2]	Return on Investment (ROI)	239	48%	129	44%	165	43%	137	42%
[3]	Return on Ad Spend (ROAS)	238	47%	133	45%	195	51%	153	47%
[4]	Cost per click (CPC)	237	47%	146	49%	191	50%	127	39%
[5]	Click through rate (CTR)	225	45%	144	49%	210	55%	140	43%
[6]	Cost per impression (CPM)	199	40%	125	42%	165	43%	143	44%
[7]	Impressions	190	38%	120	41%	179	47%	162	50%
[8]	Cost per action (CPA)	186	37%	113	38%	168	44%	124	38%
[9]	Clicks	182	36%	107	36%	168	44%	125	39%
[10]	Other	11	2%	3	1%	10	3%	9	3%
[11]	None of the above	1	0%	1	0%	1	0%	1	0%
[12]	Don’t know / Unsure	1	0%	-	0%	1	0%	2	1%
[13]	Total Shown Question	502	100%	296	100%	381	100%	324	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for “None of the above” and “Don’t know / Unsure.”
Respondents were only asked about each of the above advertising types if they had indicated in QS12 and QS13 that their business unit/team had used those advertising types in the past year.
Percentages do not add up to 100% because respondents can select multiple options.

EXHIBIT 33

HIGHER-SPEND ADVERTISER SURVEY
RANKING OF PERFORMANCE ASSESSMENT METRICS

Q18: You indicated that you use the following metrics to assess the performance of programmatic display ads for the client you spend the most time on. Please rank these metrics in terms of how important they are to accurately assessing the performance of programmatic display ads, with 1 being the most important and [NUMBER OF MEASURES SELECTED IN Q16] being the least important. (Please rank the following metrics, or select "Don't know / Unsure".)

		Respondents Ranking Metric As Most Important		Respondents Ranking Metric Among the Top 3 Most Important	
	Metric	#	%	#	%
	[A]	[B]	[C]	[D]	[E]
[1]	Return on Investment (ROI)	108	22%	193	39%
[2]	Return on Ad Spend (ROAS)	84	17%	195	39%
[3]	Conversions	73	15%	170	34%
[4]	Cost per click (CPC)	58	12%	141	28%
[5]	Cost per action (CPA)	48	10%	121	24%
[6]	Click through rate (CTR)	40	8%	128	26%
[7]	Cost per impression (CPM)	36	7%	106	21%
[8]	Clicks	30	6%	90	18%
[9]	Impressions	22	4%	84	17%
[10]	Other	1	0%	4	1%
[11]	Total	500	100%	500	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for "Other."
Respondents are only shown Q18 if they indicate that they used more than one metric to assess the performance of programmatic display ads in Q17. Respondents who selected only one metric in Q17 are assumed to have that metric ranked as most important.
Total includes respondents who ranked metrics in Q18 or selected only one metric in Q17.
0 (0% of respondents who selected at least one metric to assess the performance of programmatic display ads) respondents selected "Don't know / Unsure."

EXHIBIT 34

HIGHER-SPEND ADVERTISER SURVEY
FREQUENCY OF PERFORMANCE ASSESSMENT

Q19: How often, if at all, do you and/or your business unit/team measure or assess the performance of your programmatic display advertising? (Please select only one option.)

If you are using an ad agency and they are responsible for measuring or assessing performance of your programmatic display advertising, please indicate how often you receive information about the performance of your programmatic display advertising from the agency.

	Frequency	#	%
	[A]	[B]	[C]
[1]	Daily	59	12%
[2]	Weekly	186	37%
[3]	Monthly	142	28%
[4]	Quarterly	94	19%
[5]	Annually	18	4%
[6]	Don’t know / Unsure	3	1%
[7]	Total Shown Question	502	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.

EXHIBIT 35

HIGHER-SPEND ADVERTISER SURVEY
EXPERIMENTS ON PROGRAMMATIC DISPLAY ADS

Q20: In the past year, have you and/or your business unit/team run any experiments or test & learn initiatives on your programmatic display ads? (Please select only one option.)

	Response Options	#	%
	[A]	[B]	[C]
[1]	Yes	295	59%
[2]	No	188	37%
[3]	Don’t know / Unsure	19	4%
[4]	Total Shown Question	502	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.

EXHIBIT 36

HIGHER-SPEND ADVERTISER SURVEY
TYPES OF EXPERIMENTS ON PROGRAMMATIC DISPLAY ADS

Q21: Which of the following types of experiments or test & learn initiatives, if any, have you and/or your business unit/team run in the past year on your programmatic display ads?

	Experiment Type	#	%
	[A]	[B]	[C]
[1]	Creatives	175	59%
[2]	Audiences	160	54%
[3]	ROI/ROAS	148	50%
[4]	Bid strategies	145	49%
[5]	Ad buying tool performance	142	48%
[6]	Publishers	87	29%
[7]	Other	4	1%
[8]	Don’t know / Unsure	-	0%
[9]	Total Shown Question	295	100%

Notes & Sources:

From Higher-Spend Advertiser Survey.

Sorted in descending order based on column [B], except for “Other” and “Don’t know / Unsure.”

Percentages do not add up to 100% because respondents can select multiple options.

Respondents were only shown Q21 if they indicated in Q20 that they had conducted experiments or test & learn initiatives on their programmatic display ads in the past year.

EXHIBIT 37

LOWER-SPEND ADVERTISER SURVEY RESPONSE STATISTICS

	Status	#	%
[1]	**Invited to Complete Survey**	**2,268**	**100%**
[2]	**Clicked on Survey Link**	**1,067**	**100%**
[3]	**Screened Out of Survey**	**623**	**58%**
[4]	*CAPTCHA*	*6*	*1%*
[5]	*Age*	*9*	*1%*
[6]	*State*	*2*	*0%*
[7]	*Job Responsibilities*	*171*	*16%*
[8]	*Not Employed by a Products/Services Business*	*178*	*17%*
[9]	*Annual Advertising Spend Above $500K*	*149*	*14%*
[10]	*No Digital Advertising Spend*	*3*	*0%*
[11]	*Did Not Use Display Advertising*	*94*	*9%*
[12]	*Not Involved in Decision Making Roles for Display Advertising*	*4*	*0%*
[13]	*Failed Attention Check*	*7*	*1%*
[14]	*Overquota Respondents*	*-*	*0%*
[15]	**Self-Termination**	**42**	**4%**
[16]	**Completed the Survey**	**402**	**100%**
[17]	**Removed from Sample**	**100**	**25%**
[18]	*Slowpokes and Speeders*	*5*	*1%*
[19]	*Asked to be Excluded*	*95*	*24%*
[20]	**Analytical Sample**	**302**	**100%**
[21]	Respondents with Less than $50K Annual Ad Spend	138	46%
[22]	Respondents with $50K – $500K Annual Ad Spend	164	54%

Notes & Sources:

From Lower-Spend Advertiser Survey.

[4] Respondents who failed the CAPTCHA three times were screened out of the study.

[5] Respondents who selected “Under 18” or “Prefer not to answer” in QS3 were screened out of the study.

[6] Respondents who selected “Other” or “Don’t know / Unsure” in QS5 were screened out of the study.

EXHIBIT 37

LOWER-SPEND ADVERTISER SURVEY
RESPONSE STATISTICS

Notes & Sources (cont.):

[7] Respondents who indicated in QS6 that, as part of their job responsibilities, they do not have any involvement with "Advertising or Marketing" were screened out of the study.

[8] Respondents who indicated in QS7 that they did not work for a "Products/Service Business" were screened out of the study.

[9] Respondents who indicated in QS10 that their company spent $500,000 or more on all advertising in the last 12 months or selected "Don't know / Unsure" were screened out of the study.

[10] Respondents who indicated in QS11 that the percentage of their total advertising budget spent on digital (online) advertising was zero were screened out of the study.

[11] Respondents who did not indicate in QS12 that they used display advertising in the past year were screened out of the study.

[12] Respondents who did not select "I determine overall strategies and/or budgets for digital display," "I determine which tools and/or platforms to use for digital display," "I regularly manage digital display campaigns," or "I oversee a team/individuals that use(s) self-serve ad platforms to manage digital display campaigns" in QS13 were screened out of the study.

[13] Respondents who did not select "Somewhat likely" in QS14 were screened out of the study.

[14] Respondents were terminated due to entering the survey after it had been closed for sampling.

[15] Respondents who only completed part of the survey.

[18] Respondents who took less than 100 seconds (1.67 minutes) or more than 10,800 seconds (3 hours) to complete the survey were removed from the analysis.

[19] Respondents were asked if they are willing to participate in this survey after completing the questionnaire. Respondents who selected "Exclude my responses" in QF1 were removed from the data by the panel vendor.

[20] These respondents were used in the analysis.

EXHIBIT 38

LOWER-SPEND ADVERTISER SURVEY
SURVEY PARTICIPATION PREFERENCE

QF1: This survey is being conducted by consultants that have been retained on behalf of Google in connection with pending antitrust lawsuits in which the plaintiffs allege that Google engaged in anticompetitive conduct related to digital advertising. If you are willing to participate in this survey, please click "Include my responses" below. As a reminder, your responses will be kept anonymous and will be analyzed as part of a larger sample of responses. If you do not want to participate in this survey, please click "Exclude my responses" below.

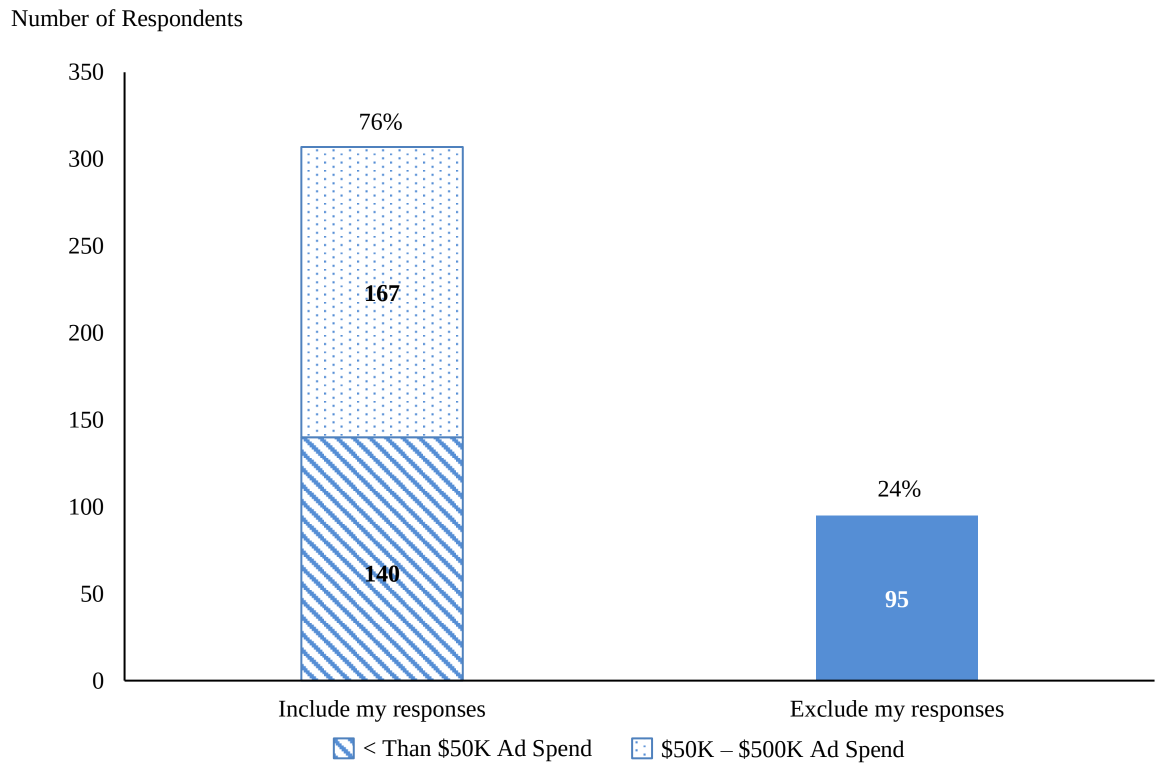


EXHIBIT 38

LOWER-SPEND ADVERTISER SURVEY
SURVEY PARTICIPATION PREFERENCE

Notes & Sources:
From Lower-Spend Advertiser Survey.
Includes respondents who completed the survey.
Respondents who indicated that they wanted their responses excluded from the survey were removed from the data by the panel vendor.
Information about annual ad spend for the 95 respondents who selected to exclude their responses is not available.

EXHIBIT 39

LOWER-SPEND ADVERTISER SURVEY
RESPONDENT DEMOGRAPHICS

		Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
		#	%	#	%	#	%
	Age	[A]	[B]	[C]	[D]	[E]	[F]
[1]	18 - 34	54	18%	22	16%	32	20%
[2]	35 - 49	223	74%	107	78%	116	71%
[3]	50 - 64	25	8%	9	7%	16	10%
[4]	65 or above	-	0%	-	0%	-	0%
[5]	Total	302	100%	138	100%	164	100%
	Gender						
[6]	Female	49	16%	12	9%	37	23%
[7]	Male	253	84%	126	91%	127	77%
[8]	Other	-	0%	-	0%	-	0%
[9]	Prefer not to answer	-	0%	-	0%	-	0%
[10]	Total	302	100%	138	100%	164	100%

Source:
From Lower-Spend Advertiser Survey.

EXHIBIT 40

LOWER-SPEND ADVERTISER SURVEY
MARKET SECTORS

QS8: Which of the following, if any, best characterizes the market sector/industry your company is in? (Please select only one option.)

		Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
	Market Sector / Industry	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Advertising or Marketing	138	46%	59	43%	79	48%
[2]	Retail (including Ecommerce)	36	12%	23	17%	13	8%
[3]	B2B/Services for Businesses	21	7%	6	4%	15	9%
[4]	Apparel/Fashion	14	5%	8	6%	6	4%
[5]	Food and Beverage	13	4%	7	5%	6	4%
[6]	Health and Beauty Products	12	4%	6	4%	6	4%
[7]	Restaurants	9	3%	6	4%	3	2%
[8]	Education	9	3%	4	3%	5	3%
[9]	Media and Entertainment	8	3%	1	1%	7	4%
[10]	Financial Products/Services for Consumers (including Fintech)	8	3%	3	2%	5	3%
[11]	Home Products/Appliances	5	2%	3	2%	2	1%
[12]	Health Care or Medical Services	5	2%	4	3%	1	1%
[13]	Consumer Electronics	5	2%	1	1%	4	2%
[14]	Telecommunications	4	1%	1	1%	3	2%
[15]	Automotive	3	1%	2	1%	1	1%
[16]	Pharmaceuticals and Remedies (Rx or OTC)	2	1%	-	0%	2	1%
[17]	Travel and Hospitality	1	0%	-	0%	1	1%
[18]	Non-Profit	-	0%	-	0%	-	0%
[19]	Government	-	0%	-	0%	-	0%
[20]	Other	9	3%	4	3%	5	3%
[21]	Total	302	100%	138	100%	164	100%

<u>Notes & Sources</u>:
From Lower-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for "Other."

EXHIBIT 41

LOWER-SPEND ADVERTISER SURVEY
JOB TITLES

QS9: Which of the following best characterizes your current job title/level? (Please select only one option.)

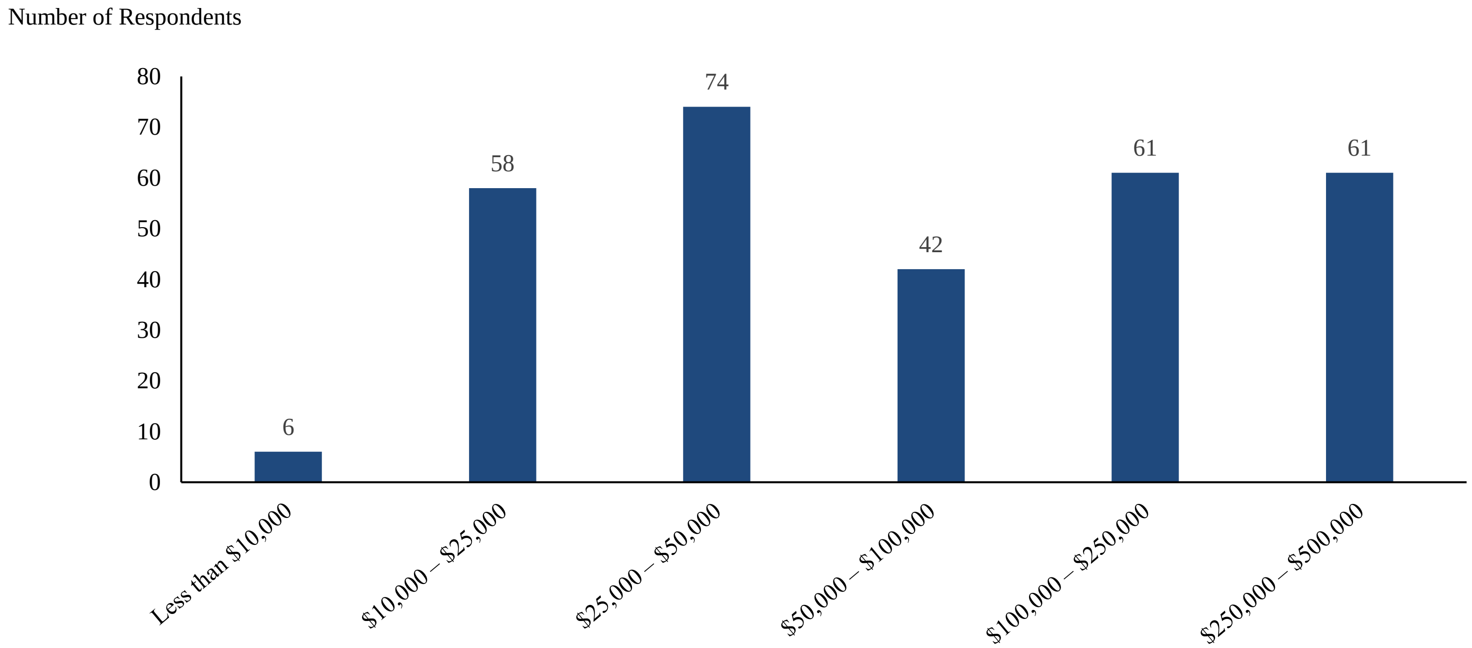
		Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
	Job Title / Level	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	C-Level (CEO, COO, CMO, etc.)	115	38%	55	40%	60	37%
[2]	Director	67	22%	31	22%	36	22%
[3]	Vice President, SVP, EVP, President, etc.	64	21%	27	20%	37	23%
[4]	Manager	35	12%	18	13%	17	10%
[5]	Supervisor/Department Head/Group Manager	10	3%	3	2%	7	4%
[6]	Associate	3	1%	-	0%	3	2%
[7]	Buyer	2	1%	1	1%	1	1%
[8]	Planner	2	1%	1	1%	1	1%
[9]	Strategist	1	0%	1	1%	-	0%
[10]	Analyst	1	0%	-	0%	1	1%
[11]	Other	2	1%	1	1%	1	1%
[12]	Total	302	100%	138	100%	164	100%

Notes & Sources:
From Lower-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for "Other."

EXHIBIT 42

LOWER-SPEND ADVERTISER SURVEY
ANNUAL AD SPEND

QS10: Approximately how much did your company spend in the last 12 months on all advertising, including all digital types (e.g., display, video, audio, social) plus all nondigital types (e.g., TV types, print, OOH, etc.)? (Please select only one option.)



<u>Notes & Sources</u>:
From Lower-Spend Advertiser Survey.

EXHIBIT 43

LOWER-SPEND ADVERTISER SURVEY
PERCENT OF BUDGET SPENT ON DIGITAL ADVERTISING

QS11: Please think about your total advertising budget. In the past year, what percentage of your total advertising budget was used for digital (online) advertising, as opposed to offline advertising. Please give your best estimate.

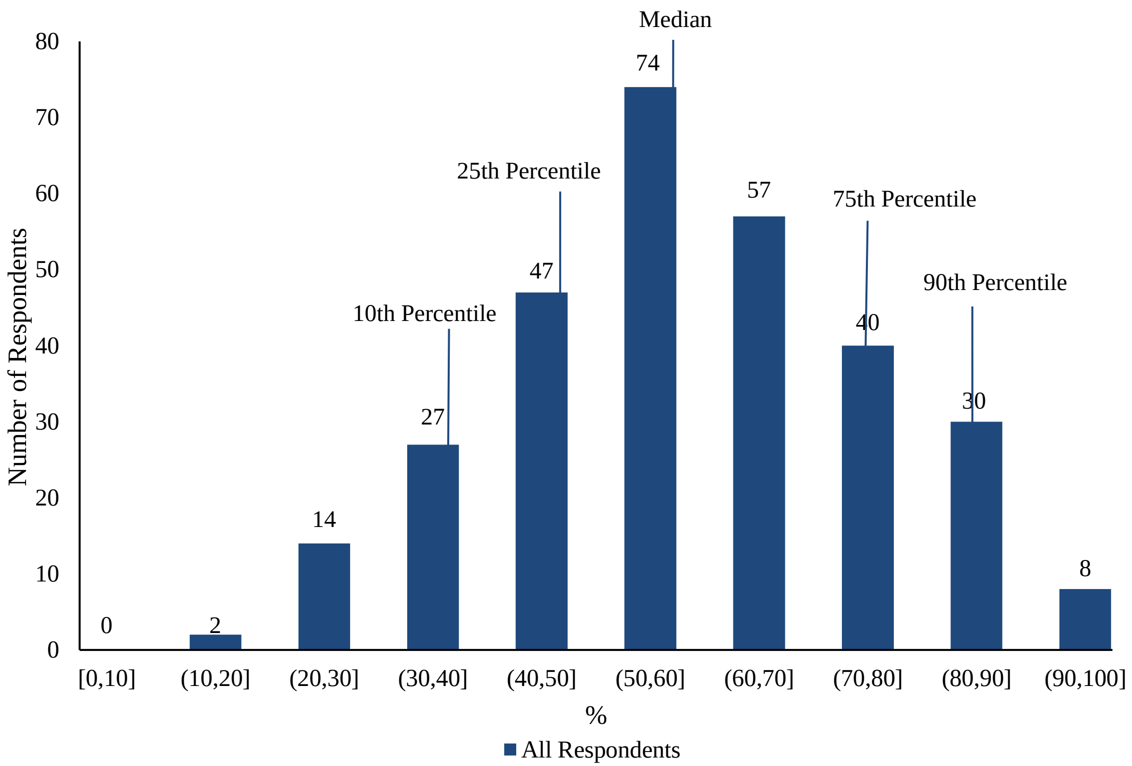


EXHIBIT 43

LOWER-SPEND ADVERTISER SURVEY
PERCENT OF BUDGET SPENT ON DIGITAL ADVERTISING

QS11: Please think about your total advertising budget. In the past year, what percentage of your total advertising budget was used for digital (online) advertising, as opposed to offline advertising. Please give your best estimate.

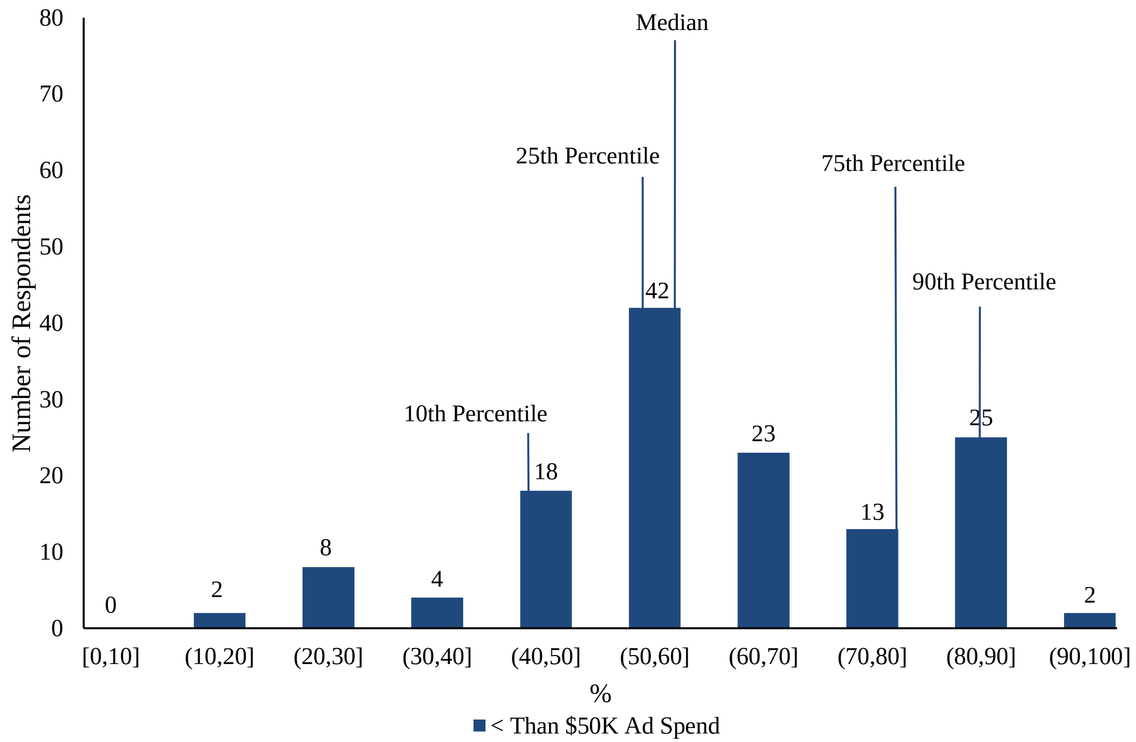


EXHIBIT 43

LOWER-SPEND ADVERTISER SURVEY
PERCENT OF BUDGET SPENT ON DIGITAL ADVERTISING

QS11: Please think about your total advertising budget. In the past year, what percentage of your total advertising budget was used for digital (online) advertising, as opposed to offline advertising. Please give your best estimate.

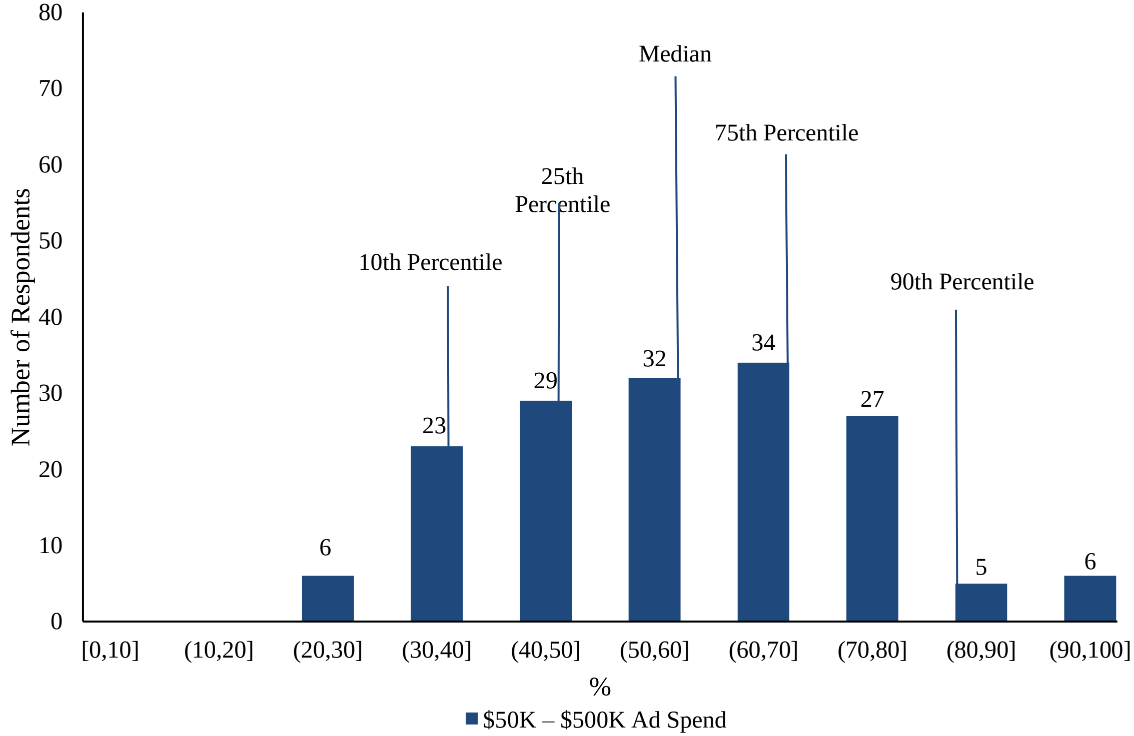


EXHIBIT 43

LOWER-SPEND ADVERTISER SURVEY
PERCENT OF BUDGET SPENT ON DIGITAL ADVERTISING

Notes & Sources:
From Lower-Spend Advertiser Survey.
Respondents who entered zero for digital (online) advertising were screened out of the survey.
3 respondents selected “Don’t know / Unsure.”

EXHIBIT 44

LOWER-SPEND ADVERTISER SURVEY
TYPES OF DIGITAL ADVERTISING USED

QS12: Which of the following types of digital advertising, if any, have you used in the past year? Please review the description of each advertising type carefully. (Please select all that apply.)

		Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
	Advertising Type	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Display	302	100%	138	100%	164	100%
[2]	Social	210	70%	100	72%	110	67%
[3]	Search	193	64%	92	67%	101	62%
[4]	Digital Video	163	54%	66	48%	97	59%
[5]	Email	143	47%	50	36%	93	57%
[6]	eCommerce Platforms	134	44%	55	40%	79	48%
[7]	Digital Audio	131	43%	59	43%	72	44%
[8]	App/In-App	119	39%	58	42%	61	37%
[9]	Connected TV	113	37%	42	30%	71	43%
[10]	Other	1	0%	-	0%	1	1%
[11]	Total	302	100%	138	100%	164	100%

Notes & Sources:
From Lower-Spend Advertiser Survey.
Respondents who did not select “Display” were screened out of the survey.
Percentages do not add up to 100% because respondents can select multiple options.
Sorted in descending order based on column [B].

EXHIBIT 45

LOWER-SPEND ADVERTISER SURVEY
NUMBER OF TYPES OF DIGITAL ADVERTISING USED

QS12: Which of the following types of digital advertising, if any, have you used in the past year? Please review the description of each advertising type carefully. (Please select all that apply.)

		Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
	Number of Types Selected	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	1	42	14%	27	20%	15	9%
[2]	2	14	5%	6	4%	8	5%
[3]	3	52	17%	30	22%	22	13%
[4]	4	25	8%	7	5%	18	11%
[5]	5	43	14%	11	8%	32	20%
[6]	6	29	10%	9	7%	20	12%
[7]	7	33	11%	17	12%	16	10%
[8]	8	13	4%	4	3%	9	5%
[9]	9	51	17%	27	20%	24	15%
[10]	10	-	0%	-	0%	-	0%
[11]	Total	302	100%	138	100%	164	100%

Notes & Sources:
From Lower-Spend Advertiser Survey.

EXHIBIT 46

LOWER-SPEND ADVERTISER SURVEY
USE OF AD AGENCY AND/OR CONSULTANT

Q2: Do you or do you not use an ad agency and/or consultant for digital advertising? (Please select only one option.)

		Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
	Response Options	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Yes, I use an ad agency and/or consultant.	202	67%	95	69%	107	65%
[2]	No, I don't use an ad agency and/or consultant	100	33%	43	31%	57	35%
[3]	Don't know / Unsure	-	0%	-	0%	-	0%
[4]	Total Shown Question	302	100%	138	100%	164	100%

Notes & Sources:
From Lower-Spend Advertiser Survey.

EXHIBIT 47

LOWER-SPEND ADVERTISER SURVEY
PURPOSE OF AD AGENCY USE

Q3: For which, if any, of the following do you use an ad agency and/or consultant? (Please select all that apply.)

		Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
	Response Options	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Media/marketing strategies	121	60%	54	57%	67	63%
[2]	Implementation of advertising (e.g., placing bids, interacting with DSPs)	106	52%	50	53%	56	52%
[3]	Tracking advertising performance	105	52%	46	48%	59	55%
[4]	Content and/or creatives	90	45%	43	45%	47	44%
[5]	Running advertising tests/experiments	86	43%	39	41%	47	44%
[6]	Customer research	74	37%	36	38%	38	36%
[7]	Budgeting decisions	65	32%	25	26%	40	37%
[8]	Allocating advertising funds across advertising types	64	32%	23	24%	41	38%
[9]	Consulting services	60	30%	17	18%	43	40%
[10]	Inventory access	46	23%	19	20%	27	25%
[11]	Other	-	0%	-	0%	-	0%
[12]	None of the above	-	0%	-	0%	-	0%
[13]	Don’t know / Unsure	-	0%	-	0%	-	0%
[14]	Total Shown Question	202	100%	95	100%	107	100%

Notes & Sources:
From Lower-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for “Other,” “None of the above,” and “Don’t know/Unsure.”
Respondents are only shown Q3 if they indicated in Q2 that they used an ad agency for digital advertising.
Percentages do not add up to 100% because respondents can select multiple options.

EXHIBIT 48

LOWER-SPEND ADVERTISER SURVEY
DIGITAL DISPLAY PLATFORMS USED IN PAST YEAR

Q4: Digital display ads are digital ads made up of text, image, video and/or other multimedia components that typically appear along the top or sides of a website, or sometimes in the middle of other content on a website. Examples of display ad formats include banner ads, animations, and interactive content. Display ads do not include ads placed on social media platforms. Which of the following platforms, if any, have you used during the last 12 months for digital display advertising?

		Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
	Platform	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Google Ads	191	63%	86	62%	105	64%
[2]	Amazon DSP	151	50%	71	51%	80	49%
[3]	Google DV360	106	35%	41	30%	65	40%
[4]	Adobe Advertising Cloud	82	27%	26	19%	56	34%
[5]	MediaMath DSP	54	18%	21	15%	33	20%
[6]	Yahoo DSP (formerly Verizon Media DSP)	49	16%	18	13%	31	19%
[7]	The Trade Desk DSP	44	15%	15	11%	29	18%
[8]	Ad Step Technologies	41	14%	10	7%	31	19%
[9]	Quantcast	33	11%	9	7%	24	15%
[10]	Criteo	29	10%	10	7%	19	12%
[11]	Amobee	28	9%	9	7%	19	12%
[12]	Other	4	1%	3	2%	1	1%
[13]	Don’t know / Unsure	3	1%	1	1%	2	1%
[14]	Total Shown Question	302	100%	138	100%	164	100%

Notes & Sources:
From Lower-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for “Other” and “Don’t know/Unsure.”
Percentages do not add up to 100% because respondents can select multiple options.

EXHIBIT 49

LOWER-SPEND ADVERTISER SURVEY
NUMBER OF DIGITAL DISPLAY PLATFORMS USED IN PAST YEAR

Q4: Digital display ads are digital ads made up of text, image, video and/or other multimedia components that typically appear along the top or sides of a website, or sometimes in the middle of other content on a website. Examples of display ad formats include banner ads, animations, and interactive content. Display ads do not include ads placed on social media platforms. Which of the following platforms, if any, have you used during the last 12 months for digital display advertising?

	Number of Platforms Selected	Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
		#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Zero	-	0%	-	0%	-	0%
[2]	One	58	19%	29	21%	29	18%
[3]	More Than One	241	80%	108	78%	133	81%
[4]	Two	114	38%	66	48%	48	29%
[5]	Three	61	20%	26	19%	35	21%
[6]	Four or More	66	22%	16	12%	50	30%
[7]	Don’t know/Unsure	3	1%	1	1%	2	1%
[8]	Total Shown Question	302	100%	138	100%	164	100%
[9]	Average # of Display Platforms Selected	2.6		2.3		2.9	

<u>Notes & Sources</u>:

From Lower-Spend Advertiser Survey.

[A] Count excludes Ad Step Technologies, which was a decoy option.

[9] Calculated as the average number of display platforms selected by respondents. Excludes respondents who selected “Don’t know/Unsure.”

EXHIBIT 50

LOWER-SPEND ADVERTISER SURVEY
USE OF GOOGLE PLATFORMS

Q4: Digital display ads are digital ads made up of text, image, video and/or other multimedia components that typically appear along the top or sides of a website, or sometimes in the middle of other content on a website. Examples of display ad formats include banner ads, animations, and interactive content. Display ads do not include ads placed on social media platforms. Which of the following platforms, if any, have you used during the last 12 months for digital display advertising?

		Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
	Platform(s)	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Neither Google Ads nor Google DV360	77	25%	37	27%	40	24%
[2]	At least one of Google Ads and Google DV360	222	74%	100	72%	122	74%
[3]	Google Ads Only	116	38%	59	43%	57	35%
[4]	Google DV360 Only	31	10%	14	10%	17	10%
[5]	Both Google Ads and Google DV360	75	25%	27	20%	48	29%
[6]	Don't know / Unsure	3	1%	1	1%	2	1%
[7]	Total Shown Question	302	100%	138	100%	164	100%

<u>Notes & Sources</u>:
From Lower-Spend Advertiser Survey.

EXHIBIT 51

LOWER-SPEND ADVERTISER SURVEY
GOOGLE USERS
NUMBER OF OTHER DISPLAY PLATFORMS

Q4: Digital display ads are digital ads made up of text, image, video and/or other multimedia components that typically appear along the top or sides of a website, or sometimes in the middle of other content on a website. Examples of display ad formats include banner ads, animations, and interactive content. Display ads do not include ads placed on social media platforms. Which of the following platforms, if any, have you used during the last 12 months for digital display advertising?

		Google Ads Users			Google DV360 Users		
	# of Other Display Platforms (Inc. Google Tools)	Total Respondents	< Than $50K Ad Spend	$50K – $500K Ad Spend	Total Respondents	< Than $50K Ad Spend	$50K – $500K Ad Spend
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	0	24	12	12	3	3	-
[2]	1	74	43	31	26	12	14
[3]	2	38	16	22	30	14	16
[4]	3	30	10	20	26	7	19
[5]	4+	25	5	20	21	5	16
[6]	Total Respondents	191	86	105	106	41	65
[7]	Average # of Other Platforms	1.8	1.5	2.1	2.4	2.0	2.7

		Google Ads Users			Google DV360 Users		
	# of Other Display Platforms (Inc. Google Tools)	Total Respondents	< Than $50K Ad Spend	$50K – $500K Ad Spend	Total Respondents	< Than $50K Ad Spend	$50K – $500K Ad Spend
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[8]	0	13%	14%	11%	3%	7%	0%
[9]	1	39%	50%	30%	25%	29%	22%
[10]	2	20%	19%	21%	28%	34%	25%
[11]	3	16%	12%	19%	25%	17%	29%
[12]	4+	13%	6%	19%	20%	12%	25%
[13]	Total Respondents	100%	100%	100%	100%	100%	100%

EXHIBIT 51

LOWER-SPEND ADVERTISER SURVEY
GOOGLE USERS
NUMBER OF OTHER DISPLAY PLATFORMS

Q4: Digital display ads are digital ads made up of text, image, video and/or other multimedia components that typically appear along the top or sides of a website, or sometimes in the middle of other content on a website. Examples of display ad formats include banner ads, animations, and interactive content. Display ads do not include ads placed on social media platforms. Which of the following platforms, if any, have you used during the last 12 months for digital display advertising?

		Google Ads Users			Google DV360 Users		
	# of Non-Google Platforms	Total Respondents	< Than $50K Ad Spend	$50K – $500K Ad Spend	Total Respondents	< Than $50K Ad Spend	$50K – $500K Ad Spend
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[14]	0	39	17	22	18	8	10
[15]	1	80	48	32	32	17	15
[16]	2	38	13	25	30	11	19
[17]	3	21	7	14	17	4	13
[18]	4+	13	1	12	9	1	8
[19]	Total Respondents	191	86	105	106	41	65
[20]	Average # of Non-Google Platforms	1.4	1.2	1.7	1.7	1.3	1.9

		Google Ads Users			Google DV360 Users		
	# of Non-Google Platforms	Total Respondents	< Than $50K Ad Spend	$50K – $500K Ad Spend	Total Respondents	< Than $50K Ad Spend	$50K – $500K Ad Spend
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[21]	0	20%	20%	21%	17%	20%	15%
[22]	1	42%	56%	30%	30%	41%	23%
[23]	2	20%	15%	24%	28%	27%	29%
[24]	3	11%	8%	13%	16%	10%	20%
[25]	4+	7%	1%	11%	8%	2%	12%
[26]	Total Respondents	100%	100%	100%	100%	100%	100%

Notes & Sources:
From Lower-Spend Advertiser Survey.
[A] Count excludes Ad Step Technologies, which was a decoy option.
Percentages calculated by dividing the number of people choosing "Google Ads" or "Google DV360" for a given number of selected platforms by the total number of people choosing "Google Ads" or "Google DV360."

EXHIBIT 52

LOWER-SPEND ADVERTISER SURVEY
USE OF GOOGLE ADS AND OTHER DISPLAY PLATFORMS

Q4: Digital display ads are digital ads made up of text, image, video and/or other multimedia components that typically website, or sometimes in the middle of other content on a website. Examples of display ad formats include banner ads, animations, and interactive content. Display ads do not include ads placed on social media platforms. Which of the following platforms, if any, have you used during the last 12 months for digital display advertising?

		Total Respondents	
	Display Platform(s)	#	%
	[A]	[B]	[C]
[1]	Google Ads and At Least One Other Display Platform	167	87%
[2]	*Google Ads and DV360 Only*	*15*	*8%*
[3]	*Google Ads, DV360 and At Least One Non-Google Display Platforms*	*60*	*31%*
[4]	*Google Ads Only and At Least One Non-Google Display Platform*	*92*	*48%*
[5]	Google Ads and No Other Display Platform	24	13%
[6]	Total Respondents Using Google Ads	191	100%

Notes & Sources:
From Lower-Spend Advertiser Survey.
Limited to respondents who selected Google Ads in Q4.

EXHIBIT 53

LOWER-SPEND ADVERTISER SURVEY
OTHER DIGITAL ADVERTISING TYPES USED BY RESPONDENTS WHO USE ONLY GOOGLE ADS FOR DISPLAY

QS12: Which of the following types of digital advertising, if any, have you used in the past year? Please review the description of each advertising type carefully. (Please select all that apply.)

	Other Digital Advertising Types Used	Respondents Who Use Google Ads and No Other Display Platforms					
		Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
		#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Social	11	46%	6	50%	5	42%
[2]	Search	9	38%	4	33%	5	42%
[3]	Email	6	25%	2	17%	4	33%
[4]	Digital Video	5	21%	2	17%	3	25%
[5]	Connected TV	2	8%	-	0%	2	17%
[6]	Digital Audio	1	4%	1	8%	-	0%
[7]	eCommerce Platforms	-	0%	-	0%	-	0%
[8]	App/In-App	-	0%	-	0%	-	0%
[9]	Other	-	0%	-	0%	-	0%
[10]	Total Shown Question	24	100%	12	100%	12	100%

	Other Digital Advertising Types Used	Respondents Who Use Google Ads and No Other Non-Google Display Platforms					
		Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
		#	%	#	%	#	%
	[A]	[H]	[I]	[J]	[K]	[L]	[M]
[1]	Social	22	56%	10	59%	12	55%
[2]	Search	21	54%	8	47%	13	59%
[3]	Email	16	41%	5	29%	11	50%
[4]	Digital Video	16	41%	7	41%	9	41%
[5]	Connected TV	7	18%	2	12%	5	23%
[6]	Digital Audio	7	18%	3	18%	4	18%
[7]	eCommerce Platforms	6	15%	4	24%	2	9%
[8]	App/In-App	8	21%	5	29%	3	14%
[9]	Other	-	0%	-	0%	-	0%
[10]	Total Shown Question	39	100%	17	100%	22	100%

EXHIBIT 53

LOWER-SPEND ADVERTISER SURVEY
OTHER DIGITAL ADVERTISING TYPES USED BY RESPONDENTS
WHO USE ONLY GOOGLE ADS FOR DISPLAY

Notes & Sources:
From Lower-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for "Other."
[A] Non-display advertising types respondents selected in QS12.
[B]-[G] Limited to respondents who selected Google Ads and no other display platforms, aside from the decoy platform, Ad Step Technologies, in Q4.
[H]-[M] Limited to respondents who selected Google Ads and no other non-Google display platforms, aside from the decoy platform, Ad Step Technologies, in Q4.

EXHIBIT 54

LOWER-SPEND ADVERTISER SURVEY
NUMBER OF OTHER DIGITAL ADVERTISING TYPES USED AMONG RESPONDENTS WHO USE ONLY GOOGLE ADS FOR DISPLAY

QS12: Which of the following types of digital advertising, if any, have you used in the past year? Please review the description of each advertising type carefully. (Please select all that apply.)

		Respondents Who Use Google Ads and No Other Display Platforms					
	Number of Other Digital	Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
	Advertising Types Used	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	0	11	46%	6	50%	5	42%
[2]	1	2	8%	1	8%	1	8%
[3]	2	4	17%	2	17%	2	17%
[4]	3	4	17%	2	17%	2	17%
[5]	4	3	13%	1	8%	2	17%
[6]	5	-	0%	-	0%	-	0%
[7]	6	-	0%	-	0%	-	0%
[8]	7	-	0%	-	0%	-	0%
[9]	8	-	0%	-	0%	-	0%
[10]	Total Shown Question	24	100%	12	100%	12	100%

		Respondents Who Use Google Ads and No Other Non-Google Display Platforms					
	Number of Other Digital	Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
	Advertising Types Used	#	%	#	%	#	%
	[A]	[H]	[I]	[J]	[K]	[L]	[M]
[1]	0	11	28%	6	35%	5	23%
[2]	1	2	5%	1	6%	1	5%
[3]	2	7	18%	2	12%	5	23%
[4]	3	5	13%	2	12%	3	14%
[5]	4	6	15%	2	12%	4	18%
[6]	5	3	8%	1	6%	2	9%
[7]	6	3	8%	2	12%	1	5%
[8]	7	1	3%	-	0%	1	5%
[9]	8	1	3%	1	6%	-	0%
[10]	Total Shown Question	39	100%	17	100%	22	100%

EXHIBIT 54

LOWER-SPEND ADVERTISER SURVEY
NUMBER OF OTHER DIGITAL ADVERTISING TYPES USED AMONG RESPONDENTS WHO USE ONLY GOOGLE ADS FOR DISPLAY

Notes & Sources:
From Lower-Spend Advertiser Survey.
[A] Counts the number of non-display advertising types respondents selected in QS12.
[B]-[G] Limited to respondents who selected Google Ads and no other display platforms, aside from the decoy platform, Ad Step Technologies, in Q4.
[H]-[M] Limited to respondents who selected Google Ads and no other non-Google display platforms, aside from the decoy platform, Ad Step Technologies, in Q4.

EXHIBIT 55

LOWER-SPEND ADVERTISER SURVEY
DIGITAL ADVERTISING BUDGET SHARE
BY RESPONDENTS WHO USE ONLY GOOGLE ADS FOR DISPLAY

Q8: Previously, you mentioned that you have used the following types of digital advertising in the past year. What is your best estimate of the share of your digital advertising spending that was used for each of these types of advertising in the past year? Specifically, please allocate 100% across the different types of digital advertising shown below based on the share of your total digital advertising spending spent on each type. The total should add up to 100%.

		Respondents Who Use Google Ads and No Other Display Platforms						Respondents Who Use Google Ads and No Other Non-Google Display Platforms					
	% of Budget Allocated	Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend		Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
	to Display Advertising	#	%	#	%	#	%	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]
	% of Digital Advertising Budget												
[1]	0% – 10%	1	4%	1	8%	-	0%	8	21%	4	24%	4	18%
[2]	10% – 20%	3	13%	1	8%	2	17%	5	13%	3	18%	2	9%
[3]	20% – 30%	6	25%	3	25%	3	25%	7	18%	3	18%	4	18%
[4]	30% – 40%	-	0%	-	0%	-	0%	2	5%	-	0%	2	9%
[5]	40% – 50%	2	8%	-	0%	2	17%	3	8%	-	0%	3	14%
[6]	50% – 60%	1	4%	1	8%	-	0%	2	5%	1	6%	1	5%
[7]	60% – 70%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%
[8]	70% – 80%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%
[9]	80% – 90%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%
[10]	90% – 100%	11	46%	6	50%	5	42%	11	28%	6	35%	5	23%
[11]	Don’t know / Unsure	-	0%	-	0%	-	0%	1	3%	-	0%	1	5%
[12]	Total	24	100%	12	100%	12	100%	39	100%	17	100%	22	100%
	% of Overall Advertising Budget												
[13]	0% – 10%	3	13%	2	17%	1	8%	10	26%	5	29%	5	23%
[14]	10% – 20%	7	29%	3	25%	4	33%	10	26%	5	29%	5	23%
[15]	20% – 30%	3	13%	1	8%	2	17%	6	15%	1	6%	5	23%
[16]	30% – 40%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%
[17]	40% – 50%	9	38%	6	50%	3	25%	10	26%	6	35%	4	18%
[18]	50% – 60%	1	4%	-	0%	1	8%	1	3%	-	0%	1	5%
[19]	60% – 70%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%
[20]	70% – 80%	1	4%	-	0%	1	8%	1	3%	-	0%	1	5%
[21]	80% – 90%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%
[22]	90% – 100%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%
[23]	Don’t know / Unsure	-	0%	-	0%	-	0%	1	3%	-	0%	1	5%
[24]	Total	24	100%	12	100%	12	100%	39	100%	17	100%	22	100%

Notes & Sources:

From Lower-Spend Advertiser Survey.

[B]-[G] Limited to respondents who selected Google Ads and no other display platforms, aside from the decoy display platform, Ad Step Technologies, in Q4.

[H]-[M] Limited to respondents who selected Google Ads and no other non-Google display platforms in Q4, aside from the decoy display platform, Ad Step Technologies.

[13]-[22] Calculated as the % of budget allocated to display in Q8 * the % of budget allocated to online advertising in QS11.

EXHIBIT 56

LOWER-SPEND ADVERTISER SURVEY
SOCIAL MEDIA PLATFORMS USED

Q5: You indicated that you have used social advertising in the past year. Social ads are digital ads placed on social media platforms such as Facebook, Instagram, LinkedIn, Snapchat, and Twitter. Which of the following social media platforms, if any, have you used during the last 12 months for social advertising? (Please select all that apply).

		Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
	Social Media Platform	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Facebook	175	83%	84	84%	91	83%
[2]	Instagram	137	65%	65	65%	72	65%
[3]	Twitter	100	48%	43	43%	57	52%
[4]	LinkedIn	99	47%	39	39%	60	55%
[5]	Tiktok	89	42%	32	32%	57	52%
[6]	Snapchat	72	34%	29	29%	43	39%
[7]	Pinterest	58	28%	17	17%	41	37%
[8]	Reddit	47	22%	18	18%	29	26%
[9]	FriendLinx	25	12%	13	13%	12	11%
[10]	Tumblr	17	8%	7	7%	10	9%
[11]	Other social media platforms	2	1%	1	1%	1	1%
[12]	Don’t know / Unsure	-	0%	-	0%	-	0%
[14]	Total Shown Question	210	100%	100	100%	110	100%

Notes & Sources:
From Lower-Spend Advertiser Survey.
Sorted in descending order based on column Total Respondents, except for “Other,” “None of the above,” and “Don't know/Unsure.”
Percentages do not add up to 100% because respondents can select multiple options.
Respondents were shown Q5 if they indicated that they had used social advertising in the past year in QS12.

EXHIBIT 57

LOWER-SPEND ADVERTISER SURVEY
DIGITAL ADVERTISING BUDGET SHARE

Q8: Previously, you mentioned that you have used the following types of digital advertising in the past year. What is your best estimate of the share of your digital advertising spending that was used for each of these types of advertising in the past year? Specifically, please allocate 100% across the different types of digital advertising shown below based on the share of your total digital advertising budget spent on each type. The total should add up to 100%.

		Total Respondents		
	Advertising Type	# of Respondents	Mean	Median
	[A]	[B]	[C]	[D]
[1]	Display	284	33%	20%
[2]	Social	196	15%	10%
[3]	Search	176	12%	10%
[4]	Digital Video	151	10%	5%
[5]	Email	129	7%	0%
[6]	eCommerce Platforms	124	7%	0%
[7]	Digital Audio	114	6%	0%
[8]	App/In-app	104	6%	0%
[9]	Connected TV	98	6%	0%
[10]	Other	-	0%	0%
[11]	Don’t know / Unsure	7	n/a	n/a
[12]	Total Shown Question	302		

		< Than $50K Ad Spend		
	Advertising Type	# of Respondents	Mean	Median
	[A]	[E]	[F]	[G]
[1]	Display	124	37%	27%
[2]	Social	88	16%	10%
[3]	Search	78	13%	10%
[4]	Digital Video	57	8%	0%
[5]	Email	38	4%	0%
[6]	eCommerce Platforms	46	6%	0%
[7]	Digital Audio	45	5%	0%
[8]	App/In-app	46	6%	0%
[9]	Connected TV	33	4%	0%
[10]	Other	-	0%	0%
[11]	Don’t know / Unsure	5	n/a	n/a
[12]	Total Shown Question	138		

EXHIBIT 57

LOWER-SPEND ADVERTISER SURVEY
DIGITAL ADVERTISING BUDGET SHARE

Q8: Previously, you mentioned that you have used the following types of digital advertising in the past year. What is your best estimate of the share of your digital advertising spending that was used for each of these types of advertising in the past year? Specifically, please allocate 100% across the different types of digital advertising shown below based on the share of your total digital advertising budget spent on each type. The total should add up to 100%.

		$50K – $500K Ad Spend		
	Advertising Type	# of Respondents	Mean	Median
	[A]	[H]	[I]	[J]
[1]	Display	160	29%	20%
[2]	Social	108	14%	10%
[3]	Search	98	12%	10%
[4]	Digital Video	94	11%	10%
[5]	Email	91	8%	5%
[6]	eCommerce Platforms	78	7%	0%
[7]	Digital Audio	69	6%	0%
[8]	App/In-app	58	6%	0%
[9]	Connected TV	65	7%	0%
[10]	Other	-	0%	0%
[11]	Don’t know / Unsure	2	n/a	n/a
[12]	Total Shown Question	164		

Notes & Sources:
From Lower-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for “Other” and “Don’t know / Unsure.”
Respondents are shown their responses from QS12. They are asked to allocate across all selected types.
Respondents can hover their mouse over each digital advertising type to review the type description.
Budget allocated for an advertising type is assumed to be equal to 0 if respondents did not select the advertising type in QS12.
[B],[E],[H] Shows number of respondents who allocated a budget for each advertising type.

EXHIBIT 58

LOWER-SPEND ADVERTISER SURVEY
RESPONSE TO DISPLAY COST INCREASE

Q9: Now suppose that, based on your analysis, the cost of display advertising has recently increased by a small but significant amount, and will remain elevated for the foreseeable future. Assume further that, based on similar analyses for other digital advertising types, the costs of other digital advertising types have not changed and are not expected to change. So if the cost of display advertising increases (while the cost of other advertising types remains types remains the same), will you or won't you divert some of your advertising spending for the coming year to other types of digital advertising?

		Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
	Response Options	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Will Divert Spending	185	61%	97	70%	88	54%
[2]	Will Not Divert Spending	103	34%	37	27%	66	40%
[3]	Don't know / Unsure	14	5%	4	3%	10	6%
[4]	Total Shown Question	302	100%	138	100%	164	100%

<u>Notes & Sources</u>:
From Lower-Spend Advertiser Survey.

EXHIBIT 59

LOWER-SPEND ADVERTISER SURVEY
ADVERTISING TYPES TO WHICH SPENDING WOULD BE DIVERTED
DUE TO DISPLAY COST INCREASE

Q10: To which other types of digital advertising below, if any, would you divert your advertising spending for the coming year as a result of the increase in the cost of display advertising?

		Respondents Indicating They Would Divert Spending to the Advertising Type					
		Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
	Advertising Type	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Social	108	58%	62	64%	46	52%
[2]	Email	79	43%	32	33%	47	53%
[3]	Search	79	43%	42	43%	37	42%
[4]	Digital Audio	75	41%	33	34%	42	48%
[5]	Digital Video	74	40%	39	40%	35	40%
[6]	eCommerce Platforms	62	34%	31	32%	31	35%
[7]	Connected TV	59	32%	23	24%	36	41%
[8]	App/In-app	54	29%	27	28%	27	31%
[9]	Other	1	1%	-	0%	1	1%
[10]	None of the above	-	0%	-	0%	-	0%
[11]	Don’t know / Unsure	-	0%	-	0%	-	0%
[12]	Total Shown Question	185	100%	97	100%	88	100%

Notes & Sources:
From Lower-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for “Other,” “None of the above,” and “Don’t know/Unsure.”
Respondents can hover their mouse over each digital advertising type to review the type description.
Percentages do not add up to 100% because respondents can select multiple options.
Respondents were only shown Q10 if they indicated that they would divert advertising spending to other types of digital advertising in Q9.

EXHIBIT 60

LOWER-SPEND ADVERTISER SURVEY
NUMBER OF ADVERTISING TYPES TO WHICH SPENDING WOULD BE DIVERTED
DUE TO DISPLAY COST INCREASE

Q10: To which other types of digital advertising below, if any, would you divert your advertising spending for the coming year as a result of the increase in the cost of display advertising?

		Respondents Indicating They Would Divert Spending to the Number of Advertising Types					
	Number of Advertising Types	Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
	Diverted Spending to	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	0	-	0%	-	0%	-	0%
[2]	1	23	12%	11	11%	12	14%
[3]	2	31	17%	21	22%	10	11%
[4]	3	68	37%	43	44%	25	28%
[5]	4	32	17%	13	13%	19	22%
[6]	5	19	10%	2	2%	17	19%
[7]	6	8	4%	5	5%	3	3%
[8]	7	1	1%	1	1%	-	0%
[9]	8	3	2%	1	1%	2	2%
[10]	9	-	0%	-	0%	-	0%
[11]	Don’t know / Unsure	-	0%	-	0%	-	0%
[12]	Total Shown Question	185	100%	97	100%	88	100%

Notes & Sources:
From Lower-Spend Advertiser Survey.
Respondents were shown Q10 if they indicated that they would divert advertiser spending to other types of digital advertising in Q9.
Respondents can hover their mouse over each digital advertising type to review the type description.

EXHIBIT 61

LOWER-SPEND ADVERTISER SURVEY
EXTENT OF SPENDING CHANGES AS A RESULT OF DISPLAY COST INCREASE

Q11: In your previous answer, you indicated that the increase in the cost of display advertising will lead you to divert some of your advertising spending to the types of digital advertising listed below. Please use the sliders below to indicate, on a scale of 0 to 10, the extent to which you would divert (that is, increase) advertising spending for the coming year to each type of digital advertising that you just indicated. For each digital advertising type below, please select 0 if you expect to keep spending on that type of digital advertising for the coming year and 10 if you expect to substantially increase spending on that type of digital advertising.

All Respondents

	Advertising Type	Total Respondents	Average Extent of Increase	Number of Respondents by Extent of Increase											Don't know / Unsure
				0	1	2	3	4	5	6	7	8	9	10	
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]
[1]	Social	108	8.0	-	-	-	-	2	4	7	22	30	26	17	-
[2]	Email	79	7.4	1	2	2	-	1	3	6	14	28	16	6	-
[3]	Search	79	7.9	-	1	2	-	1	2	6	14	18	26	9	-
[4]	Digital Audio	75	7.8	-	-	1	1	1	-	6	18	20	23	5	-
[5]	Digital Video	74	7.8	1	-	-	-	1	1	4	23	22	14	8	-
[6]	eCommerce Platforms	62	7.8	-	-	-	2	-	3	3	15	18	14	7	-
[7]	Connected TV	59	7.5	-	1	1	-	2	4	4	13	15	14	5	-
[8]	App/In-app	54	7.8	-	-	-	1	2	2	5	6	20	10	8	-
[9]	Other	1	10.0	-	-	-	-	-	-	-	-	-	-	1	-

	Advertising Type	Total Respondents	Average Extent of Increase	Number of Respondents by Extent of Increase											Don't know / Unsure
				0	1	2	3	4	5	6	7	8	9	10	
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]
[1]	Social	100%	n/a	0%	0%	0%	0%	2%	4%	6%	20%	28%	24%	16%	0%
[2]	Email	100%	n/a	1%	3%	3%	0%	1%	4%	8%	18%	35%	20%	8%	0%
[3]	Search	100%	n/a	0%	1%	3%	0%	1%	3%	8%	18%	23%	33%	11%	0%
[4]	Digital Audio	100%	n/a	0%	0%	1%	1%	1%	0%	8%	24%	27%	31%	7%	0%
[5]	Digital Video	100%	n/a	1%	0%	0%	0%	1%	1%	5%	31%	30%	19%	11%	0%
[6]	eCommerce Platforms	100%	n/a	0%	0%	0%	3%	0%	5%	5%	24%	29%	23%	11%	0%
[7]	Connected TV	100%	n/a	0%	2%	2%	0%	3%	7%	7%	22%	25%	24%	8%	0%
[8]	App/In-app	100%	n/a	0%	0%	0%	2%	4%	4%	9%	11%	37%	19%	15%	0%
[9]	Other	100%	n/a	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%

EXHIBIT 61

LOWER-SPEND ADVERTISER SURVEY
EXTENT OF SPENDING CHANGES AS A RESULT OF DISPLAY COST INCREASE

Q11: In your previous answer, you indicated that the increase in the cost of display advertising will lead you to divert some of your advertising spending to the types of digital advertising listed below. Please use the sliders below to indicate, on a scale of 0 to 10, the extent to which you would divert (that is, increase) advertising spending for the coming year to each type of digital advertising that you just indicated. For each digital advertising type below, please select 0 if you expect to keep spending on that type of digital advertising for the coming year and 10 if you expect to substantially increase spending on that type of digital advertising.

< Than $50K Ad Spend

		Total	Average Extent	Number of Respondents by Extent of Increase											Don't know
	Advertising Type	Respondents	of Increase	0	1	2	3	4	5	6	7	8	9	10	/ Unsure
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]
[10]	Social	62	8.3	-	-	-	-	1	1	4	8	17	19	12	-
[11]	Email	32	7.5	-	-	1	-	-	3	3	4	13	7	1	-
[12]	Search	42	8.2	-	-	1	-	1	1	2	4	10	16	7	-
[13]	Digital Audio	33	7.8	-	-	1	-	-	-	3	11	5	9	4	-
[14]	Digital Video	39	8.1	-	-	-	-	-	-	3	9	13	8	6	-
[15]	eCommerce Platforms	31	7.9	-	-	-	-	-	-	2	10	10	6	3	-
[16]	Connected TV	23	7.8	-	-	-	-	-	1	2	8	3	7	2	-
[17]	App/In-app	27	8.0	-	-	-	-	-	1	3	4	11	4	4	-
[18]	Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-

		Total	Average Extent	Number of Respondents by Extent of Increase											Don't know
	Advertising Type	Respondents	of Increase	0	1	2	3	4	5	6	7	8	9	10	/ Unsure
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]
[10]	Social	100%	n/a	0%	0%	0%	0%	2%	2%	6%	13%	27%	31%	19%	0%
[11]	Email	100%	n/a	0%	0%	3%	0%	0%	9%	9%	13%	41%	22%	3%	0%
[12]	Search	100%	n/a	0%	0%	2%	0%	2%	2%	5%	10%	24%	38%	17%	0%
[13]	Digital Audio	100%	n/a	0%	0%	3%	0%	0%	0%	9%	33%	15%	27%	12%	0%
[14]	Digital Video	100%	n/a	0%	0%	0%	0%	0%	0%	8%	23%	33%	21%	15%	0%
[15]	eCommerce Platforms	100%	n/a	0%	0%	0%	0%	0%	0%	6%	32%	32%	19%	10%	0%
[16]	Connected TV	100%	n/a	0%	0%	0%	0%	0%	4%	9%	35%	13%	30%	9%	0%
[17]	App/In-app	100%	n/a	0%	0%	0%	0%	0%	4%	11%	15%	41%	15%	15%	0%
[18]	Other	-	n/a	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

EXHIBIT 61

LOWER-SPEND ADVERTISER SURVEY
EXTENT OF SPENDING CHANGES AS A RESULT OF DISPLAY COST INCREASE

Q11: In your previous answer, you indicated that the increase in the cost of display advertising will lead you to divert some of your advertising spending to the types of digital advertising listed below. Please use the sliders below to indicate, on a scale of 0 to 10, the extent to which you would divert (that is, increase) advertising spending for the coming year to each type of digital advertising that you just indicated. For each digital advertising type below, please select 0 if you expect to keep spending on that type of digital advertising for the coming year and 10 if you expect to substantially increase spending on that type of digital advertising.

$50K – $500K Ad Spend

		Total	Average Extent	Number of Respondents by Extent of Increase											Don't know
	Advertising Type	Respondents	of Increase	0	1	2	3	4	5	6	7	8	9	10	/ Unsure
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]
[19]	Social	46	7.7	-	-	-	-	1	3	3	14	13	7	5	-
[20]	Digital Audio	47	7.4	1	2	1	-	1	-	3	10	15	9	5	-
[21]	Email	37	7.5	-	1	1	-	-	1	4	10	8	10	2	-
[22]	Search	42	7.9	-	-	-	1	1	-	3	7	15	14	1	-
[23]	Digital Video	35	7.4	1	-	-	-	1	1	1	14	9	6	2	-
[24]	eCommerce Platforms	31	7.7	-	-	-	2	-	3	1	5	8	8	4	-
[25]	Connected TV	36	7.3	-	1	1	-	2	3	2	5	12	7	3	-
[26]	App/In-app	27	7.7	-	-	-	1	2	1	2	2	9	6	4	-
[27]	Other	1	10.0	-	-	-	-	-	-	-	-	-	-	1	-

		Total	Average Extent	Number of Respondents by Extent of Increase											Don't know
	Advertising Type	Respondents	of Increase	0	1	2	3	4	5	6	7	8	9	10	/ Unsure
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]
[19]	Social	100%	n/a	0%	0%	0%	0%	2%	7%	7%	30%	28%	15%	11%	0%
[20]	Digital Audio	100%	n/a	2%	4%	2%	0%	2%	0%	6%	21%	32%	19%	11%	0%
[21]	Email	100%	n/a	0%	3%	3%	0%	0%	3%	11%	27%	22%	27%	5%	0%
[22]	Search	100%	n/a	0%	0%	0%	2%	2%	0%	7%	17%	36%	33%	2%	0%
[23]	Digital Video	100%	n/a	3%	0%	0%	0%	3%	3%	3%	40%	26%	17%	6%	0%
[24]	eCommerce Platforms	100%	n/a	0%	0%	0%	6%	0%	10%	3%	16%	26%	26%	13%	0%
[25]	Connected TV	100%	n/a	0%	3%	3%	0%	6%	8%	6%	14%	33%	19%	8%	0%
[26]	App/In-app	100%	n/a	0%	0%	0%	4%	7%	4%	7%	7%	33%	22%	15%	0%
[27]	Other	100%	n/a	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%

EXHIBIT 61

LOWER-SPEND ADVERTISER SURVEY
EXTENT OF SPENDING CHANGES AS A RESULT OF DISPLAY COST INCREASE

Notes & Sources:
From Lower-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for "Other."
Respondents are shown their answer choices from Q10.
Respondents were shown Q11 if they did not select "None of the above" or "Don't know/Unsure" in Q10.
Respondents can hover their mouse over each digital advertising type to review the type description.
Percentages calculated by dividing the number of people choosing the extent of increase for an advertising type by the total number of people selecting the advertising type to which to divert spending.
[C] Calculated as the average of extent of increase in [D] through [N], weighted by the number of respondents.

EXHIBIT 62

LOWER-SPEND ADVERTISER SURVEY
EXTENT OF SPENDING CHANGES AS A RESULT OF DISPLAY COST INCREASE

Q11: In your previous answer, you indicated that the increase in the cost of display advertising will lead you to divert some of your advertising spending to the types of digital advertising listed below. Please use the sliders below to indicate, on a scale of 0 to 10, the extent to which you would divert (that is, increase) advertising spending for the coming year to each type of digital advertising that you just indicated. For each digital advertising type below, please select 0 if you expect to keep spending on that type of digital advertising for the coming year and 10 if you expect to substantially increase spending on that type of digital advertising.

All Respondents

	Advertising Type	Total Respondents	Number of Respondents by Extent of Increase			Don't know / Unsure
			0 – 3	4 – 6	7 – 10	
	[A]	[B]	[C]	[D]	[E]	[F]
[1]	Social	108	-	13	95	-
[2]	Email	79	5	10	64	-
[3]	Search	79	3	9	67	-
[4]	Digital Audio	75	2	7	66	-
[5]	Digital Video	74	1	6	67	-
[6]	eCommerce Platforms	62	2	6	54	-
[7]	Connected TV	59	2	10	47	-
[8]	App/In-app	54	1	9	44	-
[9]	Other	1	-	-	1	-

	Advertising Type	Total Respondents	Number of Respondents by Extent of Increase			Don't know / Unsure
			0 – 3	4 – 6	7 – 10	
	[A]	[B]	[C]	[D]	[E]	[F]
[1]	Social	100%	0%	12%	88%	0%
[2]	Email	100%	6%	13%	81%	0%
[3]	Search	100%	4%	11%	85%	0%
[4]	Digital Audio	100%	3%	9%	88%	0%
[5]	Digital Video	100%	1%	8%	91%	0%
[6]	eCommerce Platforms	100%	3%	10%	87%	0%
[7]	Connected TV	100%	3%	17%	80%	0%
[8]	App/In-app	100%	2%	17%	81%	0%
[9]	Other	100%	0%	0%	100%	0%

EXHIBIT 62

LOWER-SPEND ADVERTISER SURVEY
EXTENT OF SPENDING CHANGES AS A RESULT OF DISPLAY COST INCREASE

Q11: In your previous answer, you indicated that the increase in the cost of display advertising will lead you to divert some of your advertising spending to the types of digital advertising listed below. Please use the sliders below to indicate, on a scale of 0 to 10, the extent to which you would divert (that is, increase) advertising spending for the coming year to each type of digital advertising that you just indicated. For each digital advertising type below, please select 0 if you expect to keep spending on that type of digital advertising for the coming year and 10 if you expect to substantially increase spending on that type of digital advertising.

< Than $50K Ad Spend

	Advertising Type	Total Respondents	Number of Respondents by Extent of Increase			Don't know / Unsure
			0 – 3	4 – 6	7 – 10	
	[A]	[B]	[C]	[D]	[E]	[F]
[10]	Social	62	-	6	56	-
[11]	Email	32	1	6	25	-
[12]	Search	42	1	4	37	-
[13]	Digital Audio	33	1	3	29	-
[14]	Digital Video	39	-	3	36	-
[15]	eCommerce Platforms	31	-	2	29	-
[16]	Connected TV	23	-	3	20	-
[17]	App/In-app	27	-	4	23	-
[18]	Other	-	-	-	-	-

	Advertising Type	Total Respondents	Number of Respondents by Extent of Increase			Don't know / Unsure
			0 – 3	4 – 6	7 – 10	
	[A]	[B]	[C]	[D]	[E]	[F]
[10]	Social	100%	0%	10%	90%	0%
[11]	Email	100%	3%	19%	78%	0%
[12]	Search	100%	2%	10%	88%	0%
[13]	Digital Audio	100%	3%	9%	88%	0%
[14]	Digital Video	100%	0%	8%	92%	0%
[15]	eCommerce Platforms	100%	0%	6%	94%	0%
[16]	Connected TV	100%	0%	13%	87%	0%
[17]	App/In-app	100%	0%	15%	85%	0%
[18]	Other	0%	0%	0%	0%	0%

EXHIBIT 62

LOWER-SPEND ADVERTISER SURVEY
EXTENT OF SPENDING CHANGES AS A RESULT OF DISPLAY COST INCREASE

Q11: In your previous answer, you indicated that the increase in the cost of display advertising will lead you to divert some of your advertising spending to the types of digital advertising listed below. Please use the sliders below to indicate, on a scale of 0 to 10, the extent to which you would divert (that is, increase) advertising spending for the coming year to each type of digital advertising that you just indicated. For each digital advertising type below, please select 0 if you expect to keep spending on that type of digital advertising for the coming year and 10 if you expect to substantially increase spending on that type of digital advertising.

$50K – $500K Ad Spend

	Advertising Type	Total Respondents	Number of Respondents by Extent of Increase 0 – 3	4 – 6	7 – 10	Don't know / Unsure
	[A]	[B]	[C]	[D]	[E]	[F]
[19]	Social	46	-	7	39	-
[20]	Digital Audio	47	4	4	39	-
[21]	Email	37	2	5	30	-
[22]	Search	42	1	4	37	-
[23]	Digital Video	35	1	3	31	-
[24]	eCommerce Platforms	31	2	4	25	-
[25]	Connected TV	36	2	7	27	-
[26]	App/In-app	27	1	5	21	-
[27]	Other	1	-	-	1	-

	Advertising Type	Total Respondents	Number of Respondents by Extent of Increase 0 – 3	4 – 6	7 – 10	Don't know / Unsure
	[A]	[B]	[C]	[D]	[E]	[F]
[19]	Social	100%	0%	15%	85%	0%
[20]	Digital Audio	100%	9%	9%	83%	0%
[21]	Email	100%	5%	14%	81%	0%
[22]	Search	100%	2%	10%	88%	0%
[23]	Digital Video	100%	3%	9%	89%	0%
[24]	eCommerce Platforms	100%	6%	13%	81%	0%
[25]	Connected TV	100%	6%	19%	75%	0%
[26]	App/In-app	100%	4%	19%	78%	0%
[27]	Other	100%	0%	0%	100%	0%

EXHIBIT 62

LOWER-SPEND ADVERTISER SURVEY
EXTENT OF SPENDING CHANGES AS A RESULT OF DISPLAY COST INCREASE

Notes & Sources:
From Lower-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for "Other."
Respondents are shown their answer choices from Q10.
Respondents were shown Q11 if they did not select "None of the above" or "Don't know/Unsure" in Q10.
Respondents can hover their mouse over each digital advertising type to review the type description.
Percentages calculated by dividing the number of people choosing the extent of increase for an advertising type by the total number of people selecting the advertising type to which to divert spending.

EXHIBIT 63

LOWER-SPEND ADVERTISER SURVEY
PERFORMANCE ASSESSMENT METRICS

Q12: Which of the following metrics, if any, are you using to assess the performance of display ads and/or social media ads? (Please select all that apply in each column.)

All Respondents

	Metric	Display Ads #	Display Ads %	Social Media Ads #	Social Media Ads %
	[A]	[B]	[C]	[D]	[E]
[1]	Return on Investment (ROI)	119	39%	90	43%
[2]	Cost per click (CPC)	117	39%	103	49%
[3]	Clicks	116	38%	92	44%
[4]	Click through rate (CTR)	107	35%	103	49%
[5]	Return on Ad Spend (ROAS)	106	35%	85	40%
[6]	Cost per impression (CPM)	106	35%	75	36%
[7]	Cost per action (CPA)	104	34%	80	38%
[8]	Conversions	102	34%	73	35%
[9]	Impressions	93	31%	64	30%
[10]	Other	3	1%	-	0%
[11]	None of the above	1	0%	-	0%
[12]	Don’t know / Unsure	3	1%	3	1%
[13]	Total Shown Question	302	100%	210	100%

< Than $50K Ad Spend

	Metric	Display Ads #	Display Ads %	Social Media Ads #	Social Media Ads %
	[A]	[B]	[C]	[D]	[E]
[14]	Return on Investment (ROI)	62	45%	47	47%
[15]	Cost per click (CPC)	55	40%	52	52%
[16]	Clicks	48	35%	45	45%
[17]	Click through rate (CTR)	47	34%	51	51%
[18]	Return on Ad Spend (ROAS)	43	31%	41	41%
[19]	Cost per impression (CPM)	50	36%	36	36%
[20]	Cost per action (CPA)	47	34%	34	34%
[21]	Conversions	38	28%	37	37%
[22]	Impressions	42	30%	26	26%
[23]	Other	-	0%	-	0%
[24]	None of the above	-	0%	-	0%
[25]	Don’t know / Unsure	3	2%	3	3%
[26]	Total Shown Question	138	100%	100	100%

EXHIBIT 63

LOWER-SPEND ADVERTISER SURVEY
PERFORMANCE ASSESSMENT METRICS

Q12: Which of the following metrics, if any, are you using to assess the performance of display ads and/or social media ads? (Please select all that apply in each column.)

$50K – $500K Ad Spend

		Display Ads		Social Media Ads	
	Metric	#	%	#	%
	[A]	[B]	[C]	[D]	[E]
[27]	Return on Investment (ROI)	57	35%	43	39%
[28]	Cost per click (CPC)	62	38%	51	46%
[29]	Clicks	68	41%	47	43%
[30]	Click through rate (CTR)	60	37%	52	47%
[31]	Return on Ad Spend (ROAS)	63	38%	44	40%
[32]	Cost per impression (CPM)	56	34%	39	35%
[33]	Cost per action (CPA)	57	35%	46	42%
[34]	Conversions	64	39%	36	33%
[35]	Impressions	51	31%	38	35%
[36]	Other	3	2%	-	0%
[37]	None of the above	1	1%	-	0%
[38]	Don’t know / Unsure	-	0%	-	0%
[39]	Total Shown Question	164	100%	110	100%

Notes & Sources:
From Lower-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for “Don’t know/Unsure” and “None of the above.”
Respondents were only asked about each of the above advertising types if they had indicated in QS12 that they had used those advertising types in the past year.
Percentages do not add up to 100% because respondents can select multiple options.

EXHIBIT 64

LOWER-SPEND ADVERTISER SURVEY
RANKING OF PERFORMANCE ASSESSMENT METRICS

Q13: You indicated that you use the following metrics to assess the performance of display ads.
Please rank these metrics in terms of how important they are to accurately assessing the performance of digital display ads, with 1 being the most important and [NUMBER OF MEASURES SELECTED IN Q12] being the least important.
(Please rank the following metrics, or select "Don't know / Unsure".)

All Respondents

		Respondents Ranking Metric As Most Important		Respondents Ranking Metric Among the Top 3 Most Important	
	Metric	#	%	#	%
	[A]	[B]	[C]	[D]	[E]
[1]	Return on Investment (ROI)	52	18%	100	34%
[2]	Clicks	40	14%	85	29%
[3]	Cost per click (CPC)	40	14%	85	29%
[4]	Return on Ad Spend (ROAS)	36	12%	84	28%
[5]	Cost per action (CPA)	31	10%	77	26%
[6]	Cost per impression (CPM)	30	10%	77	26%
[7]	Conversions	28	9%	75	25%
[8]	Click through rate (CTR)	26	9%	80	27%
[9]	Impressions	13	4%	56	19%
[10]	Other	-	0%	1	0%
[11]	Total	296	100%	296	100%

< Than $50K Ad Spend

		Respondents Ranking Metric As Most Important		Respondents Ranking Metric Among the Top 3 Most Important	
	Metric	#	%	#	%
	[A]	[B]	[C]	[D]	[E]
[12]	Return on Investment (ROI)	28	21%	51	38%
[13]	Clicks	15	11%	33	25%
[14]	Cost per click (CPC)	22	17%	39	29%
[15]	Return on Ad Spend (ROAS)	18	14%	33	25%
[16]	Cost per action (CPA)	14	11%	36	27%
[17]	Cost per impression (CPM)	14	11%	36	27%
[18]	Conversions	7	5%	26	20%
[19]	Click through rate (CTR)	11	8%	35	26%
[20]	Impressions	4	3%	24	18%
[21]	Other	-	0%	-	0%
[22]	Total	133	100%	133	100%

EXHIBIT 64

LOWER-SPEND ADVERTISER SURVEY
RANKING OF PERFORMANCE ASSESSMENT METRICS

Q13: You indicated that you use the following metrics to assess the performance of display ads.
Please rank these metrics in terms of how important they are to accurately assessing the performance of digital display ads, with 1 being the most important and [NUMBER OF MEASURES SELECTED IN Q12] being the least important.
(Please rank the following metrics, or select "Don't know / Unsure".)

$50K – $500K Ad Spend

		Respondents Ranking Metric As Most Important		Respondents Ranking Metric Among the Top 3 Most Important	
	Metric	#	%	#	%
	[A]	[B]	[C]	[D]	[E]
[23]	Return on Investment (ROI)	24	15%	49	30%
[24]	Clicks	25	15%	52	32%
[25]	Cost per click (CPC)	18	11%	46	28%
[26]	Return on Ad Spend (ROAS)	18	11%	51	31%
[27]	Cost per action (CPA)	17	10%	41	25%
[28]	Cost per impression (CPM)	16	10%	41	25%
[29]	Conversions	21	13%	49	30%
[30]	Click through rate (CTR)	15	9%	45	28%
[31]	Impressions	9	6%	32	20%
[32]	Other	-	0%	1	1%
[33]	Total	163	100%	163	100%

Notes & Sources:
From Lower-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for "Other."
Respondents are only shown Q13 if they indicate that they used more than one metric to assess the performance of display ads in Q12. Respondents who selected only one metric in Q12 are assumed to have that metric ranked as most important.
Total includes respondents who ranked metrics in Q13 or selected only one metric in Q12.
2 respondents (less than 1 percent of respondents who used at least one metric to assess the performance of display ads) selected "Don't know/Unsure." These respondents had an annual ad spend of less than $50,000.

EXHIBIT 65

LOWER-SPEND ADVERTISER SURVEY
FREQUENCY OF PERFORMANCE ASSESSMENT

Q14: How often, if at all, do you measure or assess the performance of your display advertising? (Please select only one option.)

If you are using an ad agency and/or consultant and they are responsible for measuring or assessing performance of your display advertising, please indicate how often you receive information about the performance of your display advertising from the agency.

		Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
	Frequency	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Daily	28	9%	9	7%	19	12%
[2]	Weekly	123	41%	69	50%	54	33%
[3]	Monthly	96	32%	38	28%	58	35%
[4]	Quarterly	46	15%	16	12%	30	18%
[5]	Annually	8	3%	5	4%	3	2%
[6]	Don’t know / Unsure	1	0%	1	1%	-	0%
[7]	Total Shown Question	302	100%	138	100%	164	100%

Notes & Sources:
From Lower-Spend Advertiser Survey.

EXHIBIT 66

LOWER-SPEND ADVERTISER SURVEY
EXPERIMENTS ON DISPLAY ADS

Q15: In the past year, have you run any experiments or test & learn initiatives on your digital display ads?
(Please select only one option.)

		Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
	Response Options	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Yes	180	60%	88	64%	92	56%
[2]	No	119	39%	49	36%	70	43%
[3]	Don’t know / Unsure	3	1%	1	1%	2	1%
[4]	Total Shown Question	302	100%	138	100%	164	100%

Notes & Sources:
From Lower-Spend Advertiser Survey.

EXHIBIT 67

LOWER-SPEND ADVERTISER SURVEY
TYPES OF EXPERIMENTS ON DISPLAY ADS

Q16: Which of the following types of experiments or test & learn initiatives, if any, have you run in the past year on your digital display ads?

		Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
	Experiment Type	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Creatives	111	62%	58	66%	53	58%
[2]	Audiences	84	47%	29	33%	55	60%
[3]	ROI/ROAS	74	41%	36	41%	38	41%
[4]	Ad buying tool performance	74	41%	33	38%	41	45%
[5]	Bid strategies	66	37%	27	31%	39	42%
[6]	Publishers	63	35%	25	28%	38	41%
[7]	Other	-	0%	-	0%	-	0%
[8]	Don’t know / Unsure	1	1%	-	0%	1	1%
[9]	Total Shown Question	180	100%	88	100%	92	100%

Notes & Sources:
From Lower-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for “Other” and “Don’t know/Unsure.”
Percentages do not add up to 100% because respondents can select multiple options.
Respondents were shown Q16 if they indicated in Q15 that they had conducted experiments or test & learn initiatives on their display ads in the past year.

EXHIBIT 68

AGENCY SURVEY
RESPONSE STATISTICS

	Status	#	%
[1]	**Invited to Complete Survey**	**3,916**	**100%**
[2]	**Clicked on Survey Link**	**1,909**	**100%**
[3]	**Screened Out of Survey**	**1,368**	**72%**
[4]	*CAPTCHA*	*12*	*1%*
[5]	*Age*	*14*	*1%*
[6]	*State*	*11*	*1%*
[7]	*Job Responsibilities*	*235*	*12%*
[8]	*Not Employed by a Media Agency or Full Service Agency*	*681*	*36%*
[9]	*Full Service Agency Not Focused on Media Strategy*	*171*	*9%*
[10]	*No Digital Advertising Spend*	*-*	*0%*
[11]	*Did Not Use Display Advertising*	*83*	*4%*
[12]	*Did Not Use Programmatic Display*	*24*	*1%*
[13]	*Not Involved in Decision Making Roles for Display Advertising*	*19*	*1%*
[14]	*Failed Attention Check*	*11*	*1%*
[15]	*Overquota Respondents*	*107*	*6%*
[16]	**Self-Termination**	**78**	**4%**
[17]	**Completed the Survey**	**463**	**100%**
[18]	**Removed from Sample**	**82**	**18%**
[19]	*Slowpokes and Speeders*	*11*	*2%*
[20]	*Asked to be Excluded*	*71*	*15%*
[21]	**Analytical Sample**	**381**	**82%**

Notes & Sources:

From Agency Survey.

[4] Respondents who failed the CAPTCHA three times were screened out of the study.

[5] Respondents who selected “Under 18” or “Prefer not to answer” in QS3 were screened out of the study.

[6] Respondents who selected “Other” or “Don’t know / Unsure” in QS5 were screened out of the study.

EXHIBIT 68

AGENCY SURVEY
RESPONSE STATISTICS

Notes & Sources (cont.):

[7] Respondents who indicated in QS6 that, as part of their job responsibilities, they do not have any involvement with "Advertising or Marketing" were screened out of the study.

[8] Respondents who indicated in QS7 that they did not work for a "Media Agency" or "Full Service Agency" were screened out of the study.

[9] Respondents who indicated in QS7 that they work for a "Full Service Agency" but not in "Media Strategy" in QS8 were screened out of the study.

[10] Respondents who indicated in QS13 that the percentage of the client they spend the most time on's total advertising budget spent on digital (online) advertising was zero were screened out of the study.

[11] Respondents who did not indicate in QS14 that the client they spend the most time on used display advertising in the past year were screened out of the study.

[12] Respondents who did not indicate in QS15 that the client they spend the most time on used programmatic transaction methods to purchase display ad inventory were screened out of the study.

[13] Respondents who did not select "I determine or advise the client regarding overall strategies and/or budgets for digital display," "I determine or advise the client regarding which buying tools and/or demand-side platforms (DSPs) to use for digital display," "I regularly use self-serve ad platforms to manage digital display campaigns," or "I oversee a team/individuals that use(s) self-serve ad platforms to manage digital display campaigns" responses in QS17 were screened out of the study.

[14] Respondents who did not select "Somewhat likely" in QS18 were screened out of the study.

[15] Respondents were terminated due to entering the survey after it had been closed for sampling.

[16] Respondents who only completed part of the survey.

[19] Respondents who took less than 100 seconds (1.67 minutes) or more than 10,800 seconds (3 hours) to complete the survey were removed from the analysis.

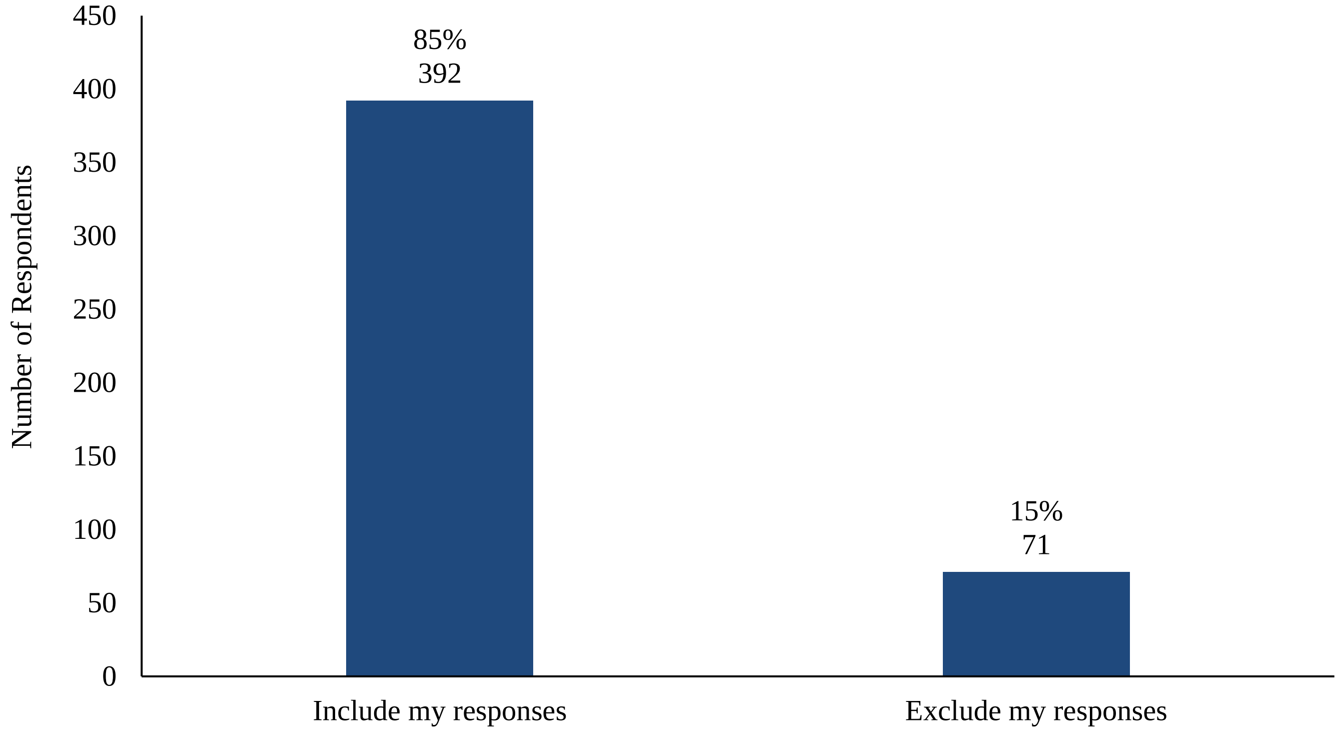
[20] Respondents were asked if they are willing to participate in this survey after completing the questionnaire. Respondents who selected "Exclude my responses" in QF1 were removed from the data by the panel vendor.

[21] These respondents were used in the analysis.

EXHIBIT 69

AGENCY SURVEY
SURVEY PARTICIPATION PREFERENCE

QF1: This survey is being conducted by consultants that have been retained on behalf of Google in connection with pending antitrust lawsuits in which the plaintiffs allege that Google engaged in anticompetitive conduct related to digital advertising. If you are willing to participate in this survey, please click "Include my responses" below. As a reminder, your responses will be kept anonymous and will be analyzed as part of a larger sample of responses. If you do not want to participate in this survey, please click "Exclude my responses" below.



Notes & Sources:
From Agency Survey.
Includes respondents who completed the survey.
Respondents who indicated that they wanted their responses excluded from the survey were removed from the data by the panel vendor.

EXHIBIT 70

AGENCY SURVEY
RESPONDENT DEMOGRAPHICS

		#	%
		[A]	[B]
	Age		
[1]	18 - 34	94	25%
[2]	35 - 49	239	63%
[3]	50 - 64	47	12%
[4]	65 or above	1	0%
[5]	Total	381	100%
	Gender		
[6]	Female	125	33%
[7]	Male	255	67%
[8]	Other	-	0%
[9]	Prefer not to answer	1	0%
[10]	Total	381	100%

Source:
From Agency Survey.

EXHIBIT 71

AGENCY SURVEY
JOB TITLES

QS9: Which of the following best characterizes your current job title/level? (Please select only one option.)

	Job Title / Level	Total Respondents #	Total Respondents %
	[A]	[B]	[C]
[1]	C-Level (CEO, COO, CMO, etc.)	140	37%
[2]	Strategist	50	13%
[3]	Social Media Manager	45	12%
[4]	Media Planner	32	8%
[5]	Account Manager / Account Executive	31	8%
[6]	Project Manager	24	6%
[7]	Media Buyer	20	5%
[8]	Business Development Manager	16	4%
[9]	Data Scientist / Data Analyst	2	1%
[10]	Traffic Manager	2	1%
[11]	Analyst / Researcher	1	0%
[12]	Editor / Writer	1	0%
[13]	Other	17	4%
[13]	Total	381	100%

Notes & Sources:
From Agency Survey.
Sorted in descending order based on column [B], except for “Other.”

EXHIBIT 72

AGENCY SURVEY
MARKET SECTORS

QS11: Which of the following, if any, best characterizes the market sector/industry of the client you spend the most time on? (Please select only one option.)

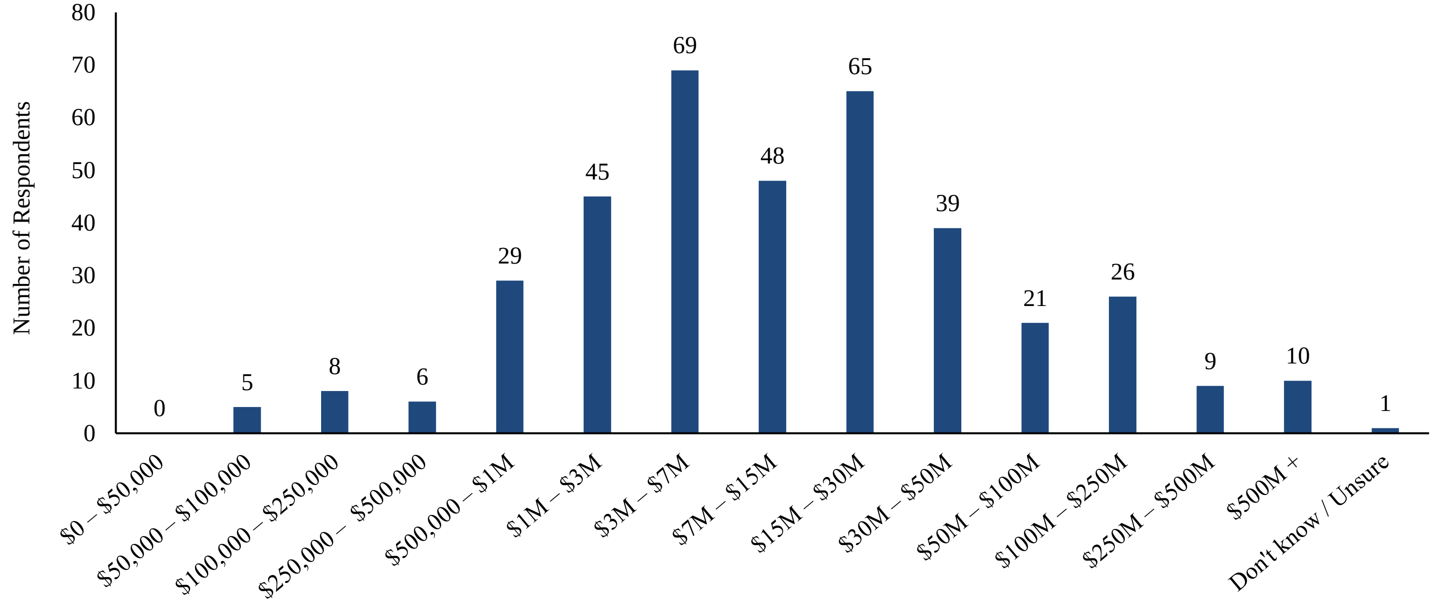
		Total Respondents	
	Market Sector / Industry	#	%
	[A]	[B]	[C]
[1]	Advertising or Marketing	139	36%
[2]	Retail (including Ecommerce)	38	10%
[3]	B2B/Services for Businesses	25	7%
[4]	Apparel/Fashion	24	6%
[5]	Media and Entertainment	21	6%
[6]	Travel and Hospitality	16	4%
[7]	Automotive	15	4%
[8]	Food and Beverage	15	4%
[9]	Financial Products/Services for Consumers (including Fintech)	14	4%
[10]	Pharmaceuticals and Remedies (Rx or OTC)	12	3%
[11]	Health Care or Medical Services	12	3%
[12]	Health and Beauty Products	11	3%
[13]	Telecommunications	9	2%
[14]	Restaurants	7	2%
[15]	Education	6	2%
[16]	Consumer Electronics	5	1%
[17]	Non-Profit	4	1%
[18]	Home Products/Appliances	2	1%
[19]	Government	1	0%
[20]	Other	5	1%
[21]	Total	381	100%

Notes & Sources:
From Agency Survey.
Sorted in descending order based on column [B], except for “Other.”

EXHIBIT 73

AGENCY SURVEY
ANNUAL AD SPEND

QS12: In the last 12 months, approximately how much did the client you spend the most time on spend on all advertising, includes all digital types (e.g., display, video, audio, social) plus all nondigital types (e.g., TV types, print, OOH, etc.)? (Please select only one option.)

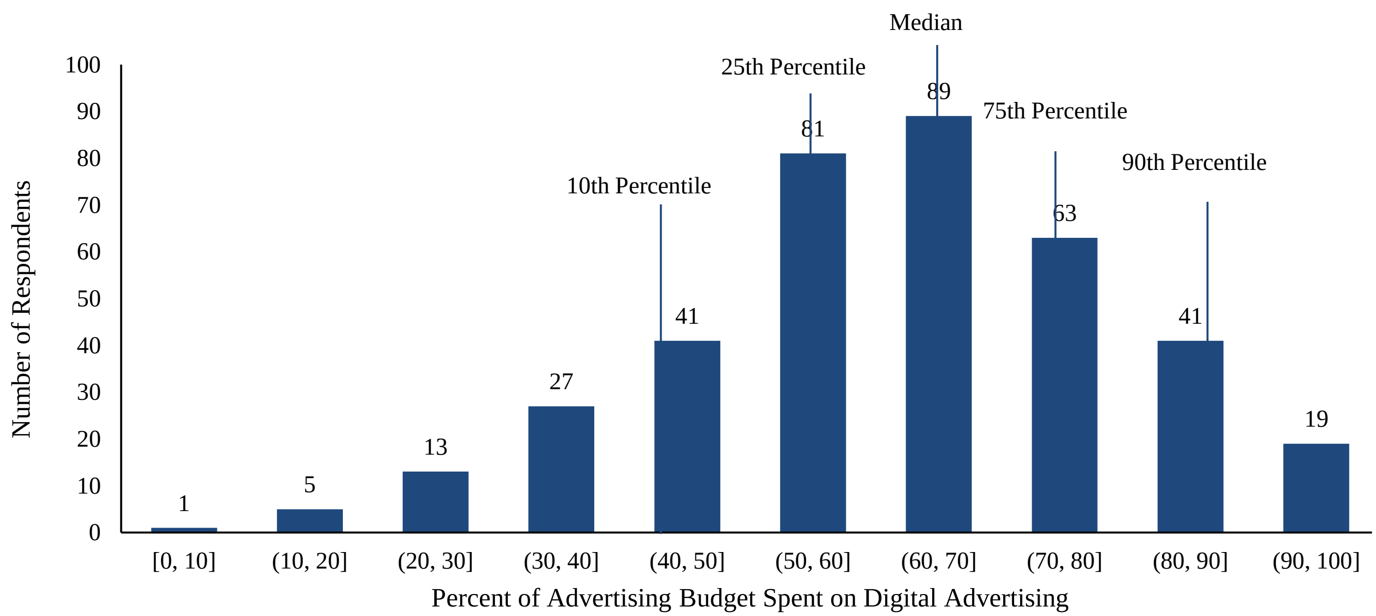


Notes & Sources:
From Agency Survey.

EXHIBIT 74

AGENCY SURVEY
PERCENT OF BUDGET SPENT ON DIGITAL ADVERTISING

QS13: Please think about the total advertising budget for the client you spend the most time on. In the past year, what percentage of the total advertising budget for the client you spend the most time on was used for digital (online) advertising, as opposed to offline advertising? Please give your best estimate.



Notes & Sources:
From Agency Survey
Respondents who entered zero for digital (online) advertising were screened out of the survey.
1 respondent selected "Don't know / Unsure."

EXHIBIT 75

AGENCY SURVEY
TYPES OF DIGITAL ADVERTISING USED

QS14: Which of the following types of digital advertising, if any, have you used in the past year for the client you spend the most time on? Please review the description of each advertising type carefully. (Please select all that apply.)

		Total Respondents	
	Advertising Type	#	%
	[A]	[B]	[C]
[1]	Display	381	100%
[2]	Social	299	78%
[3]	Search	262	69%
[4]	Digital Video	248	65%
[5]	Email	194	51%
[6]	eCommerce Platforms	191	50%
[7]	Connected TV	185	49%
[8]	App/In-App	174	46%
[9]	Digital Audio	160	42%
[10]	Other	2	1%
[11]	Total	381	100%

Notes & Sources:
From Agency Survey.
Respondents who did not select “Display” were screened out of the survey.
Percentages do not add up to 100% because respondents can select multiple options.
Sorted in descending order based on column [B], except for “Other.”

EXHIBIT 76

AGENCY SURVEY
NUMBER OF TYPES OF DIGITAL ADVERTISING USED

QS14: Which of the following types of digital advertising, if any, have you used in the past year for the client you spend the most time on? Please review the description of each advertising type carefully. (Please select all that apply.)

	Number of Types Selected	Total Respondents #	Total Respondents %
	[A]	[B]	[C]
[1]	1	48	13%
[2]	2	12	3%
[3]	3	17	4%
[4]	4	39	10%
[5]	5	62	16%
[6]	6	49	13%
[7]	7	63	17%
[8]	8	47	12%
[9]	9	44	12%
[10]	10	-	0%
[11]	Total	381	100%

Notes & Sources:
From Agency Survey.

EXHIBIT 77

AGENCY SURVEY
DISPLAY ADVERTISING TRANSACTION METHODS

QS15: Which of the following transaction methods have you used to purchase display ad inventory in the past year for the client you spend the most time on? (Please select all that apply.)

		Total Respondents	
	Transaction Method	#	%
	[A]	[B]	[C]
[1]	Programmatic Only	204	54%
[2]	Programmatic and Direct Deals	177	46%
[3]	Total	381	100%

Notes & Sources:
From Agency Survey.
Respondents who selected “Direct Deals Only,” “None of the Above,” or “Don’t know / Unsure” were screened out of the survey.

EXHIBIT 78

AGENCY SURVEY
SOCIAL MEDIA PLATFORMS USED

QS16: You indicated that you have used social advertising in the past year for the client you spend the most time on. Which of the following social media platforms, if any, have you used in the past year for the client you spend the most time on? (Please select all that apply.)

		Total Respondents	
	Social Media Platform	#	%
	[A]	[B]	[C]
[1]	Facebook	270	90%
[2]	Instagram	252	84%
[3]	LinkedIn	181	61%
[4]	Twitter	156	52%
[5]	Tiktok	151	51%
[6]	Snapchat	112	37%
[7]	Pinterest	102	34%
[8]	Reddit	76	25%
[9]	Tumblr	26	9%
[10]	FriendLinx	15	5%
[11]	Other	5	2%
[12]	None of the Above	-	0%
[13]	Don’t know / Unsure	1	0%
[14]	Total Shown Question	299	100%

Notes & Sources:
From Agency Survey.
Sorted in descending order based on column [B], except for “Other,” “None of the Above,” and “Don’t know / Unsure.”
Percentages do not add to 100% because respondents can select multiple options.
Respondents were only shown QS16 if they indicated in QS14 that they had used social advertising in the past year for the client they spend the most time on.

EXHIBIT 79

AGENCY SURVEY
ROLE OF AGENCY VS. THE CLIENT

Q2: Which of the following best describes your involvement in each of these activities for the client you spend the most time on? (Please select a value on the slider between 0 and 100 for each activity. If you do not have an answer, please select "Don't know / Unsure")

	Roles	Mean	Median
	[A]	[B]	[C]
[1]	Determining initial advertising budget	70	75
[2]	Allocating budget across different advertising types	74	78
[3]	Increasing/decreasing spending on a particular type of advertising	73	77
[4]	Increasing/decreasing spending on a particular ad campaign	73	76
[5]	Making changes to a campaign based on its performance	74	77
[6]	Deciding where to advertise	74	78
[7]	Deciding whether to purchase display ads programmatically or through direct deals with publishers	72	75
[8]	Measuring performance of display ad campaigns	71	76

Notes & Sources:
From Agency Survey.
0 is labeled as "I am not involved in these decisions" and 100 is labeled as "I am the primary decision maker."

EXHIBIT 80

AGENCY SURVEY
DIGITAL ADVERTISING BUDGET SHARE

Q3: What is your best estimate of the share of the digital advertising budget of the client you spend the most time on that was used for each of these types of advertising in the past year? Specifically, please allocate 100% across the different types of digital advertising shown below based on the share of your client's total digital advertising budget spent on each type. The total should add up to 100%.

	Advertising Type	# of Respondents	Mean	Median
	[A]	[B]	[C]	[D]
[1]	Programmatic Display	377	31%	20%
[2]	Social	295	15%	12%
[3]	Search	258	13%	10%
[4]	Digital Video	244	9%	10%
[5]	Email	191	5%	0%
[6]	eCommerce Platforms	190	7%	0%
[7]	Connected TV	183	7%	0%
[8]	Direct Deals Display	174	5%	0%
[9]	App/In-app	171	5%	0%
[10]	Digital Audio	158	4%	0%
[11]	Other	2	0%	0%
[12]	Don't know / Unsure	4	n/a	n/a
[13]	Total Shown Question	381		

Notes & Sources:
From Agency Survey.
Sorted in descending order based on column [B], except for "Other" and "Don't know / Unsure."
Respondents were shown their responses from QS14 and QS15. They are asked to allocate across all selected types.
Respondents can hover their mouse over each digital advertising type to review the type description.
[B] Shows number of respondents who allocated a budget for each advertising type.
[C]-[D] Budget allocated for an advertising type is assumed to be equal to 0 if respondents did not select the advertising type in QS14 or QS15.

EXHIBIT 81

AGENCY SURVEY
RESPONSE TO PROGRAMMATIC DISPLAY COST INCREASE

Q4: Now suppose that, based on your analysis, the cost of programmatic display advertising has recently increased by a small but significant amount, and will remain elevated for the foreseeable future. Assume further that, based on similar analyses for other digital advertising types, the costs of other digital advertising types have not changed and are not expected to change.
So, for the client you spend the most time on, if the cost of programmatic display advertising increases (while the cost of other advertising types remains the same), will you or won't you divert some of your advertising spending for the coming year for the client you spend the most time on to other types of digital advertising?

	Response Options	#	%
	[A]	[B]	[C]
[1]	Will Divert Spending	206	54%
[2]	Will Not Divert Spending	156	41%
[3]	Don't know / Unsure	19	5%
[4]	Total Shown Question	381	100%

<u>Notes & Sources</u>:
From Agency Survey.

EXHIBIT 82

AGENCY SURVEY
ADVERTISING TYPES TO WHICH SPENDING WOULD BE DIVERTED DUE TO PROGRAMMATIC DISPLAY COST INCREASE

Q5: To which other types of digital advertising below, if any, would you divert your advertising spending for the coming year for the client you spend the most time on, as a result of the increase in the cost of programmatic display advertising?

		Respondents Indicating They Would Divert Spending to the Advertising Type	
	Advertising Type	#	%
	[A]	[B]	[C]
[1]	Social	128	62%
[2]	Search	93	45%
[3]	Digital Video	82	40%
[4]	eCommerce Platforms	77	37%
[5]	Direct Deals Display	74	36%
[6]	Connected TV	73	35%
[7]	Digital Audio	53	26%
[8]	Email	54	26%
[9]	App/In-app	47	23%
[10]	Other	1	0%
[11]	None of the above	1	0%
[12]	Don’t know / Unsure	1	0%
[13]	Total Shown Question	206	100%

Notes & Sources:
From Agency Survey.
Sorted in descending order based on column [B], except for “Other,” “None of the above,” and “Don’t know / Unsure.”
Respondents can hover their mouse over each digital advertising type to review the advertising type description.
Percentages do not add up to 100% because respondents can select multiple options.
Respondents were only shown Q5 if they indicated in Q4 that they would divert advertising spending to other types of digital advertising for the client they spending the most time on.

EXHIBIT 83

AGENCY SURVEY
NUMBER OF ADVERTISING TYPES TO WHICH SPENDING WOULD BE DIVERTED DUE TO PROGRAMMATIC DISPLAY COST INCREASE

Q5: To which other types of digital advertising below, if any, would you divert your advertising spending for the coming year for the client you spend the most time on, as a result of the increase in the cost of programmatic display advertising?

	Number of Advertising Types Diverted Spending To	Respondents Indicating They Would Divert Spending to the Number of Advertising Types	
		#	%
	[A]	[B]	[C]
[1]	0	1	0%
[2]	1	33	16%
[3]	2	58	28%
[4]	3	41	20%
[5]	4	28	14%
[6]	5	16	8%
[7]	6	7	3%
[8]	7	5	2%
[9]	8	3	1%
[10]	9	13	6%
[11]	10	-	0%
[12]	Don’t know / Unsure	1	0%
[13]	Total Shown Question	206	100%

Notes & Sources:
From Agency Survey.
Respondents were only shown Q5 if they indicated in Q4 that they would divert advertising spending to other types of digital advertising for the client they spending the most time on.
Respondents can hover their mouse over each digital advertising type to review the advertising type description.

EXHIBIT 84

AGENCY SURVEY
EXTENT OF SPENDING CHANGES AS A RESULT OF PROGRAMMATIC DISPLAY COST INCREASE

Q6: In your previous answer, you indicated that the increase in the cost of programmatic display advertising will lead you to divert some of your advertising types of digital spending to the advertising listed below. Please use the sliders below to indicate, on a scale of 0 to 10, the extent to which you would divert (that is, increase) advertising spending for the coming year for the client you spend the most time on to each type of digital advertising that you just indicated. For each digital advertising type below, please select 0 if you expect to keep spending on that type of digital advertising for the coming year and 10 if you expect to substantially increase spending on that type of digital advertising.

		Total	Average Extent	Number of Respondents by Extent of Increase											Don't know
	Advertising Type	Respondents	of Increase	0	1	2	3	4	5	6	7	8	9	10	/ Unsure
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]
[1]	Social	128	6.9	-	-	6	6	6	11	14	27	31	13	12	2
[2]	Search	93	6.7	1	1	3	3	2	14	13	24	12	13	7	-
[3]	Digital Video	82	6.6	1	2	3	6	6	2	9	17	17	11	7	1
[4]	eCommerce Platforms	77	7.3	2	-	2	2	1	7	5	18	13	16	10	1
[5]	Direct Deals Display	74	6.9	3	-	3	4	4	5	4	14	14	11	11	1
[6]	Connected TV	73	6.8	-	1	2	7	5	5	3	14	23	8	5	-
[7]	Digital Audio	53	7.0	2	-	2	-	5	6	2	6	11	15	4	-
[8]	Email	54	6.8	3	-	4	1	2	2	4	9	15	10	4	-
[9]	App/In-app	47	7.2	2	-	-	1	-	5	3	12	11	5	7	1
[10]	Other	1	3.0	-	-	-	1	-	-	-	-	-	-	-	-

		Total	Average Extent	Share of Respondents by Extent of Increase											Don't know
	Advertising Type	Respondents	of Increase	0	1	2	3	4	5	6	7	8	9	10	/ Unsure
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]
[1]	Social	100%	n/a	0%	0%	5%	5%	5%	9%	11%	21%	24%	10%	9%	2%
[2]	Search	100%	n/a	1%	1%	3%	3%	2%	15%	14%	26%	13%	14%	8%	0%
[3]	Digital Video	100%	n/a	1%	2%	4%	7%	7%	2%	11%	21%	21%	13%	9%	1%
[4]	eCommerce Platforms	100%	n/a	3%	0%	3%	3%	1%	9%	6%	23%	17%	21%	13%	1%
[5]	Direct Deals Display	100%	n/a	4%	0%	4%	5%	5%	7%	5%	19%	19%	15%	15%	1%
[6]	Connected TV	100%	n/a	0%	1%	3%	10%	7%	7%	4%	19%	32%	11%	7%	0%
[7]	Digital Audio	100%	n/a	4%	0%	4%	0%	9%	11%	4%	11%	21%	28%	8%	0%
[8]	Email	100%	n/a	6%	0%	7%	2%	4%	4%	7%	17%	28%	19%	7%	0%
[9]	App/In-app	100%	n/a	4%	0%	0%	2%	0%	11%	6%	26%	23%	11%	15%	2%
[10]	Other	100%	n/a	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%

EXHIBIT 84

AGENCY SURVEY
EXTENT OF SPENDING CHANGES AS A RESULT OF PROGRAMMATIC DISPLAY COST INCREASE

Notes & Sources:
From Agency Survey.
Sorted in descending order based on column [B], except for "Other."
Respondents were shown their answer choices from Q5.
Respondents were only shown Q6 if they did not select "None of the above" or "Don't know/Unsure" in Q5.
Respondents can hover their mouse over each digital advertising type to review the type description.
Percentages calculated by dividing the number of people choosing the extent of increase for an advertising type by the total number of people selecting the advertising type to which to divert spending.
[C] Calculated as the average extent of increase in [D] through [N], weighted by the number of respondents.

EXHIBIT 85

AGENCY SURVEY
EXTENT OF SPENDING CHANGES AS A RESULT OF PROGRAMMATIC DISPLAY COST INCREASE

Q6: In your previous answer, you indicated that the increase in the cost of programmatic display advertising will lead you to divert some of your advertising types of digital spending to the advertising listed below. Please use the sliders below to indicate, on a scale of 0 to 10, the extent to which you would divert (that is, increase) advertising spending for the coming year for the client you spend the most time on to each type of digital advertising that you just indicated. For each digital advertising type below, please select 0 if you expect to keep spending on that type of digital advertising for the coming year and 10 if you expect to substantially increase spending on that type of digital advertising.

	Advertising Type	Total Respondents	Number of Respondents by Extent of Increase 0 – 3	4 – 6	7 – 10	Don't know / Unsure
	[A]	[B]	[C]	[D]	[E]	[F]
[1]	Social	128	12	31	83	2
[2]	Search	93	8	29	56	-
[3]	Digital Video	82	12	17	52	1
[4]	eCommerce Platforms	77	6	13	57	1
[5]	Direct Deals Display	74	10	13	50	1
[6]	Connected TV	73	10	13	50	-
[7]	Digital Audio	53	4	13	36	-
[8]	Email	54	8	8	38	-
[9]	App/In-app	47	3	8	35	1
[10]	Other	1	1	-	-	-

	Advertising Type	Total Respondents	Share of Respondents by Extent of Increase 0 – 3	4 – 6	7 – 10	Don't know / Unsure
	[A]	[B]	[C]	[D]	[E]	[F]
[1]	Social	100%	9%	24%	65%	2%
[2]	Search	100%	9%	31%	60%	0%
[3]	Digital Video	100%	15%	21%	63%	1%
[4]	eCommerce Platforms	100%	8%	17%	74%	1%
[5]	Direct Deals Display	100%	14%	18%	68%	1%
[6]	Connected TV	100%	14%	18%	68%	0%
[7]	Digital Audio	100%	8%	25%	68%	0%
[8]	Email	100%	15%	15%	70%	0%
[9]	App/In-app	100%	6%	17%	74%	2%
[10]	Other	100%	100%	0%	0%	0%

EXHIBIT 85

AGENCY SURVEY
EXTENT OF SPENDING CHANGES AS A RESULT OF PROGRAMMATIC DISPLAY COST INCREASE

Notes & Sources:
From Agency Survey.
Sorted in descending order based on column [B], except for "Other."
Respondents were shown their answer choices from Q5.
Respondents were only shown Q6 if they did not select "None of the above" or "Don't know/Unsure" in Q5.
Respondents can hover their mouse over each digital advertising type to review the type description.
Percentages calculated by dividing the number of people choosing the extent of increase for an advertising type by the total number of people selecting the advertising type to which to divert spending.

EXHIBIT 86

AGENCY SURVEY
AD BUYING TOOLS USED IN PAST YEAR

Q7: An ad buying tool is a programmatic advertising platform that allows advertisers and media buying agencies to bid automatically on display ad inventory from a wide range of publishers. Some ad buying tools can also be used to buy video and search ad inventory. Ad buying tools include demand side platforms, or "DSPs." Which of the following ad buying tools, if any, have you used in the past year for programmatic display advertising for the client you spend the most time on? (Please select all that apply.)

		Total Respondents		< Than $15M Ad Spend		> Than $15M Ad Spend	
	Ad Buying Tool	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Google Ads	222	58%	125	60%	96	56%
[2]	Google DV360	156	41%	83	40%	72	42%
[3]	Amazon DSP	147	39%	81	39%	66	39%
[4]	The Trade Desk DSP	100	26%	48	23%	51	30%
[5]	Adobe Advertising Cloud	70	18%	40	19%	30	18%
[6]	Yahoo DSP (formerly Verizon Media DSP)	50	13%	27	13%	23	14%
[7]	Criteo	49	13%	22	10%	27	16%
[8]	MediaMath DSP	41	11%	24	11%	17	10%
[9]	Xandr Invest	37	10%	17	8%	20	12%
[10]	Simpli.fi	36	9%	14	7%	22	13%
[11]	Taboola	34	9%	18	9%	16	9%
[12]	Quantcast	30	8%	16	8%	14	8%
[13]	Adform	31	8%	17	8%	14	8%
[14]	StackAdapt	29	8%	17	8%	12	7%
[15]	Zeta Global	28	7%	12	6%	16	9%
[16]	Basis by Centro	26	7%	13	6%	13	8%
[17]	Amobee	27	7%	13	6%	14	8%
[18]	Outbrain	25	7%	17	8%	8	5%
[19]	Beeswax	20	5%	9	4%	11	6%
[20]	Adelphic	15	4%	6	3%	9	5%
[21]	Illumin (formerly AcuityAds)	15	4%	4	2%	11	6%
[22]	Ad Step Technologies	29	8%	9	4%	20	12%
[23]	Quorexx	15	4%	7	3%	8	5%
[24]	Other	7	2%	5	2%	2	1%
[25]	Don't know / Unsure	1	0%	1	0%	-	0%
[26]	Total Shown Question	381	100%	210	100%	170	100%

EXHIBIT 86

AGENCY SURVEY
AD BUYING TOOLS USED IN PAST YEAR

Notes & Sources:
From Agency Survey.
Sorted in descending order based on column [B], except for "Other" and "Don't know / Unsure."
[D]-[G] Does not include one respondent who answered "Don't know / Unsure" to QS12.
Percentages do not add up to 100% because respondents can select multiple options.

EXHIBIT 87

AGENCY SURVEY
NUMBER OF AD BUYING TOOLS USED IN PAST YEAR

Q7: An ad buying tool is a programmatic advertising platform that allows advertisers and media buying agencies to bid automatically on display ad inventory from a wide range of publishers. Some ad buying tools can also be used to buy video and search ad inventory. Ad buying tools include demand side platforms, or "DSPs." Which of the following ad buying tools, if any, have you used in the past year for programmatic display advertising for the client you spend the most time on? (Please select all that apply.)

	Number of Ad Buying Tools Selected	Total Respondents		< Than $15M Ad Spend		> Than $15M Ad Spend	
		#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Zero	2	1%	2	1%	-	0%
[2]	One	101	27%	64	30%	37	22%
[3]	More than One	277	73%	143	68%	133	78%
[4]	Two	73	19%	30	14%	43	25%
[5]	Three	87	23%	50	24%	36	21%
[6]	Four or More	117	31%	63	30%	54	32%
[7]	Don't know / Unsure	1	0%	1	0%	-	0%
[8]	Total Shown Question	381	100%	210	100%	170	100%
[9]	Average # of Ad Buying Tools Selected	3.1		3.0		3.3	

<u>Notes & Sources</u>:

From Agency Survey.

[A] Count excludes Quorexx and Ad Step Technologies, which were decoy answer options.

[D]-[G] Does not include one respondent who answered "Don't know / Unsure" to QS12.

[9] Calculated as the average number of ad buying tools selected by respondents. Excludes respondents who selected "Don't know / Unsure."

EXHIBIT 88

AGENCY SURVEY
USE OF GOOGLE AD BUYING TOOLS

Q7: An ad buying tool is a programmatic advertising platform that allows advertisers and media buying agencies to bid automatically on display ad inventory from a wide range of publishers. Some ad buying tools can also be used to buy video and search ad inventory. Ad buying tools include demand side platforms, or "DSPs." Which of the following ad buying tools, if any, have you used in the past year for programmatic display advertising for the client you spend the most time on? (Please select all that apply.)

		Total Respondents		< Than $15M Ad Spend		> Than $15M Ad Spend	
	Ad Buying Tool(s)	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Neither Google Ads nor Google DV360	105	28%	63	30%	42	25%
[2]	At least one of Google Ads and Google DV360	275	72%	146	70%	128	75%
[3]	Google Ads Only	119	31%	63	30%	56	33%
[4]	Google DV360 Only	53	14%	21	10%	32	19%
[5]	Both Google Ads and Google DV360	103	27%	62	30%	40	24%
[6]	Don't know / Unsure	1	0%	1	0%	-	0%
[7]	Total Shown Question	381	100%	210	100%	170	100%

Notes & Sources:

From Agency Survey.

[D]-[G] Does not include one respondent who answered "Don't know / Unsure" to QS12.

EXHIBIT 89

AGENCY SURVEY
GOOGLE USERS
NUMBER OF OTHER AD BUYING TOOLS

Q7: An ad buying tool is a programmatic advertising platform that allows advertisers and media buying agencies to bid automatically on display ad inventory from a wide range of publishers. Some ad buying tools can also be used to buy video and search ad inventory. Ad buying tools include demand side platforms, or "DSPs." Which of the following ad buying tools, if any, have you used in the past year for programmatic display advertising for the client you spend the most time on? (Please select all that apply.)

		Google Ads Users			Google DV360 Users		
	# of Other Ad Buying Tools (Incl. Google Tools)	Total Respondents	< Than $15M Ad Spend	> Than $15M Ad Spend	Total Respondents	< Than $15M Ad Spend	> Than $15M Ad Spend
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	0	38	22	16	10	7	3
[2]	1	39	15	24	18	9	9
[3]	2	54	34	19	40	23	16
[4]	3	27	15	12	22	9	13
[5]	4+	64	39	25	66	35	31
[6]	Total Respondents	222	125	96	156	83	72
[7]	Average # of Other Ad Buying Tools	2.7	2.7	2.7	3.5	3.3	3.8

		Google Ads Users			Google DV360 Users		
	# of Other Ad Buying Tools (Incl. Google Tools)	Total Respondents	< Than $15M Ad Spend	> Than $15M Ad Spend	Total Respondents	< Than $15M Ad Spend	> Than $15M Ad Spend
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[8]	0	17%	18%	17%	6%	8%	4%
[9]	1	18%	12%	25%	12%	11%	13%
[10]	2	24%	27%	20%	26%	28%	22%
[11]	3	12%	12%	13%	14%	11%	18%
[12]	4+	29%	31%	26%	42%	42%	43%
[13]	Total Respondents	100%	100%	100%	100%	100%	100%

EXHIBIT 89

AGENCY SURVEY
GOOGLE USERS
NUMBER OF OTHER AD BUYING TOOLS

Q7: An ad buying tool is a programmatic advertising platform that allows advertisers and media buying agencies to bid automatically on display ad inventory from a wide range of publishers. Some ad buying tools can also be used to buy video and search ad inventory. Ad buying tools include demand side platforms, or "DSPs." Which of the following ad buying tools, if any, have you used in the past year for programmatic display advertising for the client you spend the most time on? (Please select all that apply.)

		Google Ads Users			Google DV360 Users		
	# of Non-Google Ad Buying Tools	Total Respondents	< Than $15M Ad Spend	> Than $15M Ad Spend	Total Respondents	< Than $15M Ad Spend	> Than $15M Ad Spend
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[14]	0	46	27	19	18	12	6
[15]	1	57	28	28	36	22	13
[16]	2	45	23	22	31	12	19
[17]	3	30	22	8	25	16	9
[18]	4+	44	25	19	46	21	25
[19]	Total Respondents	222	125	96	156	83	72
[20]	Average # of Non-Google Ad Buying Tools	2.2	2.2	2.3	2.9	2.6	3.2

		Google Ads Users			Google DV360 Users		
	# of Non-Google Ad Buying Tools	Total Respondents	< Than $15M Ad Spend	> Than $15M Ad Spend	Total Respondents	< Than $15M Ad Spend	> Than $15M Ad Spend
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[21]	0	21%	22%	20%	12%	14%	8%
[22]	1	26%	22%	29%	23%	27%	18%
[23]	2	20%	18%	23%	20%	14%	26%
[24]	3	14%	18%	8%	16%	19%	13%
[25]	4+	20%	20%	20%	29%	25%	35%
[26]	Total Respondents	100%	100%	100%	100%	100%	100%

Notes & Sources:
From Agency Survey.
[A] Count excludes Quorexx and Ad Step Technologies, which were decoy answer options.
[C]-[D],[F]-[G] Does not include one respondent who answered "Don't know / Unsure" to QS12.
Percentages calculated by dividing the number of people choosing "Google Ads" or "Google DV360" for a given number of selected ad buying tools by the total number of people choosing "Google Ads" or "Google DV360."

EXHIBIT 90

AGENCY SURVEY
USE OF GOOGLE ADS AND OTHER AD BUYING TOOLS

Q7: An ad buying tool is a programmatic advertising platform that allows advertisers and media buying agencies to bid automatically on display ad inventory from a wide range of publishers. Some ad buying tools can also be used to buy video and search ad inventory. Ad buying tools include demand side platforms, or "DSPs." Which of the following ad buying tools, if any, have you used in the past year for programmatic display advertising for the client you spend the most time on? (Please select all that apply.)

		Total Respondents	
	Ad Buying Tool(s)	#	%
	[A]	[B]	[C]
[1]	Google Ads and At Least One Other Ad Buying Tool	184	83%
[2]	*Google Ads and DV360 Only*	*8*	*4%*
[3]	*Google Ads, DV360 and At Least One Non-Google Ad Buying Tool*	*95*	*43%*
[4]	*Google Ads Only and At Least One Non-Google Ad Buying Tool*	*81*	*36%*
[5]	Google Ads and No Other Ad Buying Tool	38	17%
[6]	Total Respondents Using Google Ads	222	100%

Notes & Sources:
From Agency Survey.
Limited to respondents who selected Google Ads in Q7.

EXHIBIT 91

AGENCY SURVEY
OTHER DIGITAL ADVERTISING TYPES USED BY RESPONDENTS WHO USE ONLY GOOGLE ADS FOR PROGRAMMATIC DISPLAY

QS14: Which of the following types of digital advertising, if any, have you used in the past year for the client you spend the most time on? Please review the description of each advertising type carefully. (Please select all that apply.)

	Other Digital Advertising Types Used	Respondents Who Use Google Ads and No Other Ad Buying Tools for Programmatic Display		Respondents Who Use Google Ads and No Other Non-Google Ad Buying Tools for Programmatic Display	
		#	%	#	%
	[A]	[B]	[C]	[D]	[E]
[1]	Social	26	68%	34	74%
[1]	Search	24	63%	32	70%
[2]	Digital Video	22	58%	29	63%
[3]	Email	21	55%	26	57%
[4]	Connected TV	19	50%	22	48%
[5]	eCommerce Platforms	16	42%	18	39%
[6]	Digital Audio	14	37%	18	39%
[7]	App/In-App	11	29%	14	30%
[8]	Direct Display	11	29%	14	30%
[9]	Other	-	-	-	-
[10]	Total	38	100%	46	100%

Notes & Sources:
From Agency Survey.
Sorted in descending order based on column [B], except for "Other."
[A] Includes the non-programmatic display advertising types respondents selected in QS14 and QS15.
[B]-[C] Limited to respondents who selected Google Ads and no other ad buying tools (including Google DV360) in Q7. Includes 1 respondent who selected Google Ads and one of the decoy ad buying tools, Ad Step Technologies and Quorexx.
[D]-[E] Limited to respondents who selected Google Ads and no other Non-Google ad buying tool in Q7. Includes 1 respondent who selected Google Ads and one of the decoy ad buying tools, Ad Step Technologies and Quorexx.

EXHIBIT 92

AGENCY SURVEY
NUMBER OF OTHER DIGITAL ADVERTISING TYPES USED BY RESPONDENTS WHO USE ONLY GOOGLE ADS FOR PROGRAMMATIC DISPLAY

QS14: Which of the following types of digital advertising, if any, have you used in the past year for the client you spend the most time on? Please review the description of each advertising type carefully. (Please select all that apply.)

	Number of Other Digital Advertising Types Used	Respondents Who Use Google Ads and No Other Ad Buying Tools for Programmatic Display		Respondents Who Use Google Ads and No Other Non-Google Ad Buying Tools for Programmatic Display	
		#	%	#	%
	[A]	[B]	[C]	[D]	[E]
[1]	0	8	21%	8	17%
[2]	1	3	8%	3	7%
[3]	2	3	8%	4	9%
[4]	3	3	8%	4	9%
[5]	4	1	3%	4	9%
[6]	5	5	13%	5	11%
[7]	6	3	8%	3	7%
[8]	7	3	8%	3	7%
[9]	8	3	8%	4	9%
[10]	9	6	16%	8	17%
[11]	Total	38	100%	46	100%

Notes & Sources:
From Agency Survey.
[A] Counts the number of non-programmatic display advertising types respondents selected in QS14 and QS15.
[B]-[C] Limited to respondents who selected Google Ads and no other ad buying tools (including Google DV360) in Q7. Includes 1 respondent who selected Google Ads and one of the decoy ad buying tools, Ad Step Technologies and Quorexx.
[D]-[E] Limited to respondents who selected Google Ads and no other Non-Google ad buying tools in Q7. Includes 1 respondent who selected Google Ads and one of the decoy ad buying tools, Ad Step Technologies and Quorexx.

EXHIBIT 93

AGENCY SURVEY
PROGRAMMATIC DISPLAY ADVERTISING BUDGET SHARE
BY RESPONDENTS WHO USE ONLY GOOGLE ADS FOR PROGRAMMATIC DISPLAY

Q3: What is your best estimate of the share of the digital advertising budget of the client you spend the most time on that was used for each of these types of advertising in the past year? Specifically, please allocate 100% across the different types of digital advertising shown below based on the share of your client's total digital advertising budget spent on each type. The total should add up to 100%.

	% of Budget Allocated to Programmatic Display Advertising	Respondents Who Use Google Ads and No Other Ad Buying Tools for Programmatic Display		Respondents Who Use Google Ads and No Other Non-Google Ad Buying Tools for Programmatic Display	
		#	%	#	%
	[A]	[B]	[C]	[D]	[E]
	% of Digital Advertising Budget				
[1]	0% – 10%	10	26%	12	26%
[2]	10% – 20%	12	32%	15	33%
[3]	20% – 30%	4	11%	5	11%
[4]	30% – 40%	1	3%	2	4%
[5]	40% – 50%	-	0%	1	2%
[6]	50% – 60%	3	8%	3	7%
[7]	60% – 70%	-	0%	-	0%
[8]	70% – 80%	-	0%	-	0%
[9]	80% – 90%	-	0%	-	0%
[10]	90% – 100%	8	21%	8	17%
[11]	Don't know / Unsure	-	0%	-	0%
[12]	Total	38	100%	46	100%
	% of Overall Advertising Budget				
[13]	0% – 10%	16	42%	19	41%
[14]	10% – 20%	7	18%	9	20%
[15]	20% – 30%	4	11%	5	11%
[16]	30% – 40%	4	11%	6	13%
[17]	40% – 50%	3	8%	3	7%
[18]	50% – 60%	3	8%	3	7%
[19]	60% – 70%	-	0%	-	0%
[20]	70% – 80%	-	0%	-	0%
[21]	80% – 90%	1	3%	1	2%
[22]	90% – 100%	-	0%	-	0%
[23]	Don't know / Unsure	-	0%	-	0%
[24]	Total	38	100%	46	100%

EXHIBIT 93

AGENCY SURVEY
PROGRAMMATIC DISPLAY ADVERTISING BUDGET SHARE
BY RESPONDENTS WHO USE ONLY GOOGLE ADS FOR PROGRAMMATIC DISPLAY

Notes & Sources:
From Agency Survey.
[B]-[C] Limited to respondents who selected Google Ads and no other ad buying tools (including Google DV360) in Q7. Includes 1 respondent who selected Google Ads and one of the decoy ad buying tools, Ad Step Technologies and Quorexx.
[D]-[E] Limited to respondents who selected Google Ads and no other Non-Google ad buying tools in Q7. Includes 1 respondent who selected Google Ads and one of the decoy ad buying tools, Ad Step Technologies and Quorexx.
[13]-[23] Calculated as the % of budget allocated to programmatic display in Q3 * the % of budget allocated to online advertising in QS13.

EXHIBIT 94

AGENCY SURVEY
CHANGE IN AD BUYING TOOL USE

Q9: Do you expect to use the same number, more, or fewer ad buying tools for programmatic display advertising next year for the client you spend the most time on? (Please select only one option.)

	Response Options	#	%
	[A]	[B]	[C]
[1]	More	83	22%
[2]	Fewer	83	22%
[3]	Same Number	206	54%
[4]	Don’t know / Unsure	8	2%
[5]	Total Shown Question	380	100%

Notes & Sources:
From Agency Survey.
Respondents were show Q9 if they did not select “Don’t know / Unsure” in Q7.

EXHIBIT 95

AGENCY SURVEY
FACTORS CONSIDERED WHEN CHOOSING AD BUYING TOOLS FOR PROGRAMMATIC DISPLAY ADVERTISING

Q11: Which of the following factors, if any, do you consider when deciding to use a particular ad buying tool for programmatic display advertising for the client you spend the most time on? (Please select all that apply.)

	Factor	Respondents Indicating the Factor was Considered	
		#	%
	[A]	[B]	[C]
[1]	Targeting criteria and capabilities	178	47%
[2]	Cost	171	45%
[1]	Ad placement effectiveness	170	45%
[2]	Media optimization of placements during a campaign	169	44%
[3]	Audience scale/Reach	166	44%
[4]	Ease of use/User interface	155	41%
[5]	Reporting features	149	39%
[6]	Brand safety/fraud protection	139	37%
[7]	API and integrations	128	34%
[8]	Budget management tools	113	30%
[9]	Forecasting tools	110	29%
[10]	Support	102	27%
[11]	Identity management	91	24%
[12]	Troubleshooting capabilities	80	21%
[13]	Other	2	1%
[14]	Don’t know / Unsure	1	0%
[15]	Total Shown Question	380	100%

Notes & Sources:
From Agency Survey.
Sorted in descending order based on column [B], except for “Other” and “Don’t know / Unsure.”
Respondents were show Q11 if they did not select “Don’t know / Unsure” in Q7.
Percentages do not add up to 100% because respondents can select multiple options.

EXHIBIT 96

AGENCY SURVEY
DISCONTINUATION OF AD BUYING TOOL USE

Q12: Have you stopped using any ad buying tool(s) for programmatic display advertising in the past year for the client you spend the most time on? (Please select only one option.)

	Response Options	#	%
	[A]	[B]	[C]
[1]	Yes	81	21%
[2]	No	290	76%
[3]	Don’t know / Unsure	9	2%
[4]	Total Shown Question	380	100%

Notes & Sources:
From Agency Survey.
Respondents were show Q12 if they did not select “Don’t know / Unsure” in Q7.

EXHIBIT 97

AGENCY SURVEY
REASONS FOR STARTING USE OF AT LEAST ONE AD BUYING TOOL

Q14: Have you started using any ad buying tool(s) in the past year for programmatic display advertising for the client you spend the most time on? (Please select only one option.)

	Response Options	#	%
	[A]	[B]	[C]
[1]	Yes	118	31%
[2]	No	256	67%
[3]	Don’t know / Unsure	6	2%
[4]	Total Shown Question	380	100%

Notes & Sources:
From Agency Survey.
Respondents were show Q14 if they did not select “Don’t know / Unsure” in Q7.

EXHIBIT 98

AGENCY SURVEY
PERFORMANCE ASSESSMENT METRICS

Q16: Which of the following metrics, if any, do you use to assess the performance of programmatic display ads, direct deals display ads, social media ads, and/or digital video ads for the client you spend the most time on? (Please select all that apply in each column.)

		Programmatic Display Ads		Direct Deals Display Ads		Social Media Ads		Digital Video Ads	
	Metric	#	%	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]
[1]	Conversions	187	49%	75	42%	158	53%	102	41%
[2]	Return on Investment (ROI)	177	46%	70	40%	135	45%	103	42%
[3]	Cost per click (CPC)	175	46%	83	47%	145	48%	88	35%
[4]	Return on Ad Spend (ROAS)	175	46%	85	48%	157	53%	109	44%
[5]	Impressions	170	45%	68	38%	139	46%	118	48%
[6]	Cost per impression (CPM)	161	42%	79	45%	133	44%	126	51%
[7]	Click through rate (CTR)	156	41%	83	47%	163	55%	100	40%
[8]	Cost per action (CPA)	146	38%	75	42%	143	48%	93	38%
[9]	Clicks	140	37%	68	38%	130	43%	89	36%
[10]	Other	8	2%	3	2%	8	3%	15	6%
[11]	None of the above	-	0%	1	1%	-	0%	-	0%
[12]	Don't know / Unsure	1	0%	2	1%	2	1%	2	1%
[13]	Total Shown Question	381	100%	177	100%	299	100%	248	100%

Notes & Sources:
From Agency Survey.
Sorted in descending order based on column [B], except for "None of the above" and "Don't know / Unsure."
Respondents were only asked about each of the above advertising types if they had indicated in QS14 and QS15 that the client they spend the most time on used those advertising types in the past year.
Percentages do not add up to 100% because respondents can select multiple options.

EXHIBIT 99

AGENCY SURVEY
PERFORMANCE ASSESSMENT METRICS

Q17: You indicated that you use the following metrics to assess the performance of programmatic display ads for the client you spend the most time on. Please rank these metrics in terms of how important they are to accurately assessing the performance of programmatic display ads, with 1 being the most important and [NUMBER OF MEASURES SELECTED IN Q16] being the least important. (Please rank the following metrics, or select "Don't know / Unsure".)

		Respondents Ranking Metric As Most Important		Respondents Ranking Metric Among the Top 3 Most Important	
	Metric	#	%	#	%
	[A]	[B]	[C]	[D]	[E]
[1]	Return on Investment (ROI)	77	20%	148	39%
[2]	Return on Ad Spend (ROAS)	54	14%	139	37%
[3]	Conversions	45	12%	138	36%
[4]	Cost per action (CPA)	40	11%	102	27%
[5]	Cost per click (CPC)	35	9%	97	26%
[6]	Cost per impression (CPM)	35	9%	95	25%
[7]	Impressions	34	9%	90	24%
[8]	Clicks	29	8%	70	18%
[9]	Click through rate (CTR)	27	7%	98	26%
[10]	Other	3	1%	7	2%
[11]	Total	379	100%	379	100%

Notes & Sources:
From Agency Survey.
Sorted in descending order based on column [B], except for "Other."
Respondents were only shown Q17 if they indicate that they used more than one metric to assess the performance of programmatic display ads in Q16. Respondents who selected only one metric in Q16 are assumed to have that metric ranked as most important. Total includes respondents who ranked metrics in Q17 or selected only one metric in Q16.
1 respondent (less than 1% of respondents who selected at least one metric to assess the performace of programmatic display ads) selected "Don't know / Unsure."

EXHIBIT 100

AGENCY SURVEY
FREQUENCY OF PERFORMANCE ASSESSMENT

Q18: How often, if at all, do you measure or assess the performance of the programmatic display advertising for the client you spend the most time on? (Please select only one option.)

	Frequency	#	%
	[A]	[B]	[C]
[1]	Daily	36	9%
[2]	Weekly	147	39%
[3]	Monthly	131	34%
[4]	Quarterly	53	14%
[5]	Annually	14	4%
[6]	Don’t know / Unsure	-	0%
[7]	Total Shown Question	381	100%

Notes & Sources:
From Agency Survey.

EXHIBIT 101

AGENCY SURVEY
EXPERIMENTS ON PROGRAMMATIC DISPLAY ADS

Q19: In the past year, have you run any experiments or test & learn initiatives to assess the performance of the programmatic display ads for the client you spend the most time on? (Please select only one option.)

	Response Options	#	%
	[A]	[B]	[C]
[1]	Yes	233	61%
[2]	No	132	35%
[3]	Don’t know / Unsure	16	4%
[4]	Total Shown Question	381	100%

Notes & Sources:
From Agency Survey.

EXHIBIT 102

AGENCY SURVEY
TYPES OF EXPERIMENTS ON PROGRAMMATIC DISPLAY ADS

Q20: Which of the following types of experiments or test & learn initiatives, if any, have you run in the past year to assess the performance of the programmatic display ads for the client you spend the most time on?

	Experiment Type	#	%
	[A]	[B]	[C]
[1]	Audiences	149	64%
[2]	Creatives	136	58%
[3]	ROI/ROAS	127	55%
[4]	Bid strategies	113	48%
[5]	Ad buying tool performance	113	48%
[6]	Publishers	73	31%
[7]	Other	1	0%
[8]	Don’t know / Unsure	-	0%
[9]	Total Shown Question	233	100%

Notes & Sources:
From Agency Survey.
Sorted in descending order based on column [B], except for “Other” and “Don’t know / Unsure.”
Percentages do not add up to 100% because respondents can select multiple options.
Respondents were only shown Q20 if they indicated in Q19 that they had conducted experiments or test & learn initiatives on their programmatic display ads in the past year.

EXHIBIT 103

SENSITIVITY ANALYSIS BY RESPONDENT DEMOGRAPHIC

	Response Options	Complete Sample Survey Results	Gender		Age				Region			
			Female	Male	18 – 34	35 – 49	50 – 64	65+	NE	MW	S	W
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
	Higher-Spend Advertiser Survey											
[1]	Will Divert Spending	59%	65%	56%	65%	57%	56%	n/a	66%	54%	54%	60%
[2]	Used Multiple Ad Buying Tools	75%	77%	74%	76%	75%	74%	n/a	82%	80%	75%	68%
[3]	Sample Size (N)	502	135	367	100	336	66	-	115	70	155	162
	Lower-Spend Advertiser Survey											
[4]	Will Divert Spending	61%	49%	64%	57%	63%	56%	n/a	57%	69%	57%	65%
[5]	Used Multiple Display Platforms	80%	67%	82%	78%	80%	80%	n/a	72%	85%	79%	82%
[6]	Sample Size (N)	302	49	253	54	223	25	-	54	61	119	68
	Agency Survey											
[7]	Will Divert Spending	54%	51%	56%	65%	51%	49%	100%	57%	64%	51%	50%
[8]	Used Multiple Ad Buying Tools	73%	78%	70%	74%	71%	77%	100%	81%	80%	75%	61%
[9]	Sample Size (N)	381	125	255	94	239	47	1	100	45	119	117

Notes & Sources:

From Higher-Spend Advertiser, Lower-Spend Advertiser, and Agency Surveys.

[1] Respondents who, in Q5 of the Higher-Spend Advertiser Survey, indicated that they would divert advertising spending as a response to an increase in the cost of programmatic display advertising.

[2] Respondents who, in Q8 of the Higher-Spend Advertiser Survey, selected more than one ad buying tool. Count excludes Quorexx and Ad Step Technologies, which were decoy answer options.

[4] Respondents who, in Q9 of the Lower-Spend Advertiser Survey, indicated that they would divert advertising spending as a response to an increase in the cost of display advertising.

[5] Respondents who, in Q4 of the Lower-Spend Advertiser Survey, selected more than one display platform. Count excludes Ad Step Technologies, which was a decoy answer option.

[7] Respondents who, in Q4 of the Agency Survey, indicated that they would divert advertising spending for the client they spend the most time on as a response to an increase in the cost of programmatic display advertising.

[8] Respondents who, in Q7 of the Agency Survey, selected more than one ad buying tool for the client they spend the most time on. Count excludes Quorexx and Ad Step Technologies, which were decoy answer options.

[C]-[D] From QS4 in Higher-Spend Advertiser Survey, QS4 in Lower-Spend Advertiser Survey, and QS4 in Agency Survey.

[E]-[H] From QS3 in Higher-Spend Advertiser Survey, QS3 in Lower-Spend Advertiser Survey, and QS3 in Agency Survey.

[I]-[L] From QS5 in Higher-Spend Advertiser Survey, QS5 in Lower-Spend Advertiser Survey, and QS5 in Agency Survey. Each respondent's state of residence is categorized into regions based on the U.S. census regions. See Census Regions and Divisions of the United States, U.S. Census Bureau, available at https://www2.census.gov/geo/pdfs/maps-data/maps/reference/us_regdiv.pdf.

EXHIBIT 104

SENSITIVITY ANALYSIS BY RESPONDENT ANNUAL AD SPEND

			Annual Ad Spend															
	Response Options	Complete Sample Survey Results	Less than $10K	$10K to $25K	$25K to $50K	$50K to $100K	$100K to $250K	$250K to $500K	$500K to $1M	$1M to $3M	$3M to $7M	$7M to $15M	$15M to $30M	$30M to $50M	$50M to $100M	$100M to $250M	$250M to $500M	$500M+
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]	[P]	[Q]	[R]
	Higher-Spend Advertiser Survey																	
[1]	Will Divert Spending	59%	n/a	n/a	n/a	n/a	n/a	n/a	61%	55%	56%	66%	61%	56%	58%	61%	48%	60%
[2]	Used Multiple Ad Buying Tools	75%	n/a	n/a	n/a	n/a	n/a	n/a	58%	60%	63%	85%	84%	79%	72%	79%	95%	80%
[3]	Sample Size (N)	502	n/a	n/a	n/a	n/a	n/a	n/a	31	78	57	87	74	68	43	33	21	10
	Lower-Spend Advertiser Survey																	
[4]	Will Divert Spending	61%	67%	74%	68%	62%	54%	48%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
[5]	Used Multiple Display Platforms	80%	67%	84%	74%	86%	84%	75%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
[6]	Sample Size (N)	302	6	58	74	42	61	61	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Agency Survey																	
[7]	Will Divert Spending	54%	-	-	-	80%	63%	83%	62%	60%	49%	52%	49%	38%	62%	69%	56%	40%
[8]	Used Multiple Ad Buying Tools	73%	-	-	-	60%	75%	50%	69%	71%	59%	79%	72%	82%	86%	69%	89%	100%
[9]	Sample Size (N)	381	-	-	-	5	8	6	29	45	69	48	65	39	21	26	9	10

Notes & Sources:
From Higher-Spend Advertiser, Lower-Spend Advertiser, and Agency Surveys.
[1] Respondents who, in Q5 of the Higher-Spend Advertiser Survey, indicated that they would divert advertising spending as a response to an increase in the cost of programmatic display advertising.
[2] Respondents who, in Q8 of the Higher-Spend Advertiser Survey, selected more than one ad buying tool. Count excludes Quorexx and Ad Step Technologies, which were decoy answer options.
[4] Respondents who, in Q9 of the Lower-Spend Advertiser Survey, indicated that they would divert advertising spending as a response to an increase in the cost of display advertising.
[5] Respondents who, in Q4 of the Lower-Spend Advertiser Survey, selected more than one display platform. Count excludes Ad Step Technologies, which was a decoy answer option.
[7] Respondents who, in Q4 of the Agency Survey, indicated that they would divert advertising spending for the client they spend the most time on as a response to an increase in the cost of programmatic display advertising.
[8] Respondents who, in Q7 of the Agency Survey, selected more than one ad buying tool for the client they spend the most time on. Count excludes Quorexx and Ad Step Technologies, which were decoy answer options.
[C]-[R] From QS10 in Higher-Spend Advertiser Survey, QS10 in Lower-Spend Advertiser Survey, and QS12 in Agency Survey. Agency Results do not include one respondent who answered “Don’t know / Unsure” to QS12.

EXHIBIT 105

SENSITIVITY ANALYSIS BY RESPONDENT SURVEY COMPLETION TIME

		Survey Results in Sample that Excludes Completion Time Outliers		Test of H_0	
	Response Options	1.67 Minutes - 3 Hours	3 Minutes - 2 Hours	z-score	p-value
	[A]	[B]	[C]	[D]	[E]
	Higher-Spend Advertiser Survey				
[1]	Will Divert Spending	59%	63%	-1.46	0.15
[2]	Used Multiple Ad Buying Tools	75%	82%	-2.73**	0.01
[3]	Sample Size (N)	502	453		
	Lower-Spend Advertiser Survey				
[4]	Will Divert Spending	61%	65%	-1.02	0.31
[5]	Used Multiple Display Platforms	80%	84%	-1.47	0.14
[6]	Sample Size (N)	302	277		
	Agency Survey				
[7]	Will Divert Spending	54%	56%	-0.58	0.57
[8]	Used Multiple Ad Buying Tools	73%	75%	-0.82	0.41
[9]	Sample Size (N)	381	365		

Notes & Sources:
From Higher-Spend Advertiser, Lower-Spend Advertiser, and Agency Surveys.
[1] Respondents who, in Q5 of the Higher-Spend Advertiser Survey, indicated that they would divert advertising spending as a response to an increase in the cost of programmatic display advertising.
[2] Respondents who, in Q8 of the Higher-Spend Advertiser Survey, selected more than one ad buying tool. Count excludes Quorexx and Ad Step Technologies, which were decoy answer options.
[4] Respondents who, in Q9 of the Lower-Spend Advertiser Survey, indicated that they would divert advertising spending as a response to an increase in the cost of display advertising.
[5] Respondents who, in Q4 of the Lower-Spend Advertiser Survey, selected more than one display platform. Count excludes Ad Step Technologies, which was a decoy answer option.
[7] Respondents who, in Q4 of the Agency Survey, indicated that they would divert advertising spending for the client they spend the most time on as a response to an increase in the cost of programmatic display advertising.

EXHIBIT 105

SENSITIVITY ANALYSIS BY RESPONDENT SURVEY COMPLETION TIME

Notes & Sources (continued):

[8] Respondents who, in Q7 of the Agency Survey, selected more than one ad buying tool for the client they spend the most time on. Count excludes Quorexx and Ad Step Technologies, which were decoy answer options.

[B] Limited to respondents with qtime between 1.67 minutes (100 seconds) and 3 hours (10,800 seconds).

[C] Limited to respondents with qtime between 3 minutes (180 seconds) and 2 hours (7,200 seconds).

[D] Significance tests reflect the difference in the percentage of respondents in columns [B] and [C] saying they will divert spending or use multiple ad tools, between outlier completion time exclusions. The z-scores are based on a two-tailed test with $z = (p_1 - p_2) / \mathrm{sqrt} (p_1 \times (1 - p_1) / n_1 + p_2 \times (1 - p_2) / n_2)$; a z-score of ±1.96, for example, corresponds to a significance at the 95% confidence level. One asterisk (*) denotes significance at the 0.1 level with $p < 0.1$ and two asterisks (**) denote significance at the 0.05 level with $p < 0.05$.

[E] Reflects significance levels of the difference of percentages in [B] and [C].

EXHIBIT 106

SUMMARY OF SELECTED RESULTS ACROSS SURVEYS

	Survey Results	Higher-Spend Advertiser Survey		Lower-Spend Advertiser Survey		Test of H_0	
		%	N	%	N	z-score	p-value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Respondents Who Would Divert Spending	59%	502	61%	302	-0.70	0.48
[2]	Respondents Who Use More Than One Advertising Type	85%	502	86%	302	-0.41	0.69
[3]	Respondents Who Use More Than One Ad Buying Tool/Display Platform	75%	502	80%	302	-1.63	0.10
[4]	Google Ads Users Using At Least One Other Non-Google Ad Buying Tool/Display Platform	76%	330	80%	191	-0.86	0.39

	Survey Results	Higher-Spend Advertiser Survey		Agency Survey		Test of H_0	
		%	N	%	N	z-score	p-value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[5]	Respondents Who Would Divert Spending	59%	502	54%	381	1.39	0.16
[6]	Respondents Who Use More Than One Advertising Type	85%	502	87%	381	-1.01	0.31
[7]	Respondents Who Use More Than One Ad Buying Tool	75%	502	73%	381	0.73	0.46
[8]	Google Ads Users Using At Least One Other Non-Google Ad Buying Tool	76%	330	79%	222	-0.81	0.42

	Survey Results	Lower-Spend Advertiser Survey		Agency Survey		Test of H_0	
		%	N	%	N	z-score	p-value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[9]	Respondents Who Would Divert Spending	61%	302	54%	381	1.90*	0.06
[10]	Respondents Who Use More Than One Advertising Type	86%	302	87%	381	-0.50	0.62
[11]	Respondents Who Use More Than One Ad Buying Tool/Display Platform	80%	302	73%	381	2.19**	0.03
[12]	Google Ads Users Using At Least One Other Non-Google Ad Buying Tool/Display Platform	80%	191	79%	222	0.08	0.94

EXHIBIT 106

SUMMARY OF SELECTED RESULTS ACROSS SURVEYS

Notes & Sources:

From Higher-Spend Advertiser, Lower-Spend Advertiser, and Agency Surveys.

[1] Respondents who, in Q5 of the Higher-Spend Advertiser Survey and Q9 of the Lower-Spend Advertiser Survey, indicated that they would divert advertising spending as a response to an increase in the cost of display advertising. In the Higher-Spend Advertiser Survey, this question referred to programmatic display advertising specifically.

[2] Respondents who, in QS12 of the Higher- and Lower-Spend Advertiser Surveys, indicated that they had used more than one type of digital advertising in the past year.

[3] Respondents who, in Q8 of the Higher-Spend Advertiser Survey and Q4 of the Lower-Spend Advertiser Survey, selected more than one ad buying tool/display platform. Count excludes Quorexx and Ad Step Technologies, which were decoy answer options.

[4] Respondents who, in Q8 of the Higher-Spend Advertiser Survey and Q4 of the Lower-Spend Advertiser Survey, indicated using Google Ads, and who selected at least one non-Google ad buying tool/display platform. Count excludes Quorexx and Ad Step Technologies, which were decoy answer options.

[5] Respondents who, in Q5 of the Higher-Spend Advertiser Survey and Q4 of the Agency Survey, indicated that they would divert advertising spending as a response to an increase in the cost of programmatic display advertising. In the Agency Survey, respondents were asked to answer the question for the client they spend the most time on.

[6] Respondents who, in QS12 of the Higher-Advertiser Survey and QS14 of the Agency Survey, indicated that they had used more than one type of digital advertising in the past year. In the Agency Survey, respondents were asked to answer the question for the client they spend the most time on.

[7] Respondents who, in Q8 of the Higher-Spend Advertiser Survey and Q7 of the Agency Survey, selected more than one ad buying tool. Count excludes Quorexx and Ad Step Technologies, which were decoy answer options. In the Agency Survey, respondents were asked to answer the question for the client they spend the most time on.

[8] Respondents who, in Q8 of the Higher-Spend Advertiser Survey and Q7 of the Agency Survey, indicated using Google Ads, and who selected at least one non-Google ad buying tool. Count excludes Quorexx and Ad Step Technologies, which were decoy answer options. In the Agency Survey, respondents were asked to answer the question for the client they spend the most time on.

[9] Respondents who, in Q4 of the Agency Survey and Q9 of the Lower-Spend Advertiser Survey, indicated that they would divert advertising spending as a response to an increase in the cost of display advertising. In the Agency Survey, this referred to programmatic display advertising specifically and respondents were asked to answer the question for the client they spend the most time on.

[10] Respondents who, in QS14 of the Agency Survey and QS12 of the Lower-Spend Advertiser Survey, indicated that they had used more than one type of digital advertising in the past year. In the Agency Survey, respondents were asked to answer the question for the client they spend the most time on.

[11] Respondents who, in Q7 of the Agency Survey and Q4 of the Lower-Spend Advertiser Survey, selected more than one ad buying tool/display platform. Count excludes Quorexx and Ad Step Technologies, which were decoy answer options. In the Agency Survey, respondents were asked to answer the question for the client they spend the most time on.

[12] Respondents who, in Q7 of the Agency Survey and Q4 of the Lower-Spend Advertiser Survey, indicated using Google Ads, and who selected at least one non-Google ad buying tool/display platform. Count excludes Quorexx and Ad Step Technologies, which were decoy answer options. In the Agency Survey, respondents were asked to answer the question for the client they spend the most time on.

EXHIBIT 106

SUMMARY OF SELECTED RESULTS ACROSS SURVEYS

Notes & Sources (continued):

[F] Significance tests reflect the difference in the survey results in columns [B] and [D] across the Higher-Spend Advertiser, Lower-Spend Advertiser, and Agency Surveys. The z-scores are based on a two-tailed test with $z = (p_1 - p_2) / \text{sqrt} (p_1 \times (1 - p_1) / n_1 + p_2 \times (1 - p_2) / n_2)$; a z-score of ±1.96, for example, corresponds to a significance at the 95% confidence level. One asterisk (*) denotes significance at the 0.1 level with $p < 0.1$ and two asterisks (**) denote significance at the 0.05 level with $p < 0.05$.

[G] Reflects significance levels of the difference of percentages in [B] and [D].

EXHIBIT 107

LOWER-SPEND ADVERTISER SURVEY
SUMMARY OF SELECTED RESULTS

		Full Sample		< Than $50K Ad Spend		Test of H_0	
	Survey Results	%	N	%	N	z-score	p-value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Respondents Who Would Divert Spending	61%	302	70%	138	-1.88*	0.06
[2]	Respondents Who Use More Than One Advertising Type	86%	302	80%	138	1.44	0.15
[3]	Respondents Who Use More Than One Display Platform	80%	302	78%	138	0.37	0.71
[4]	Google Ads Users Using At Least One Other Non-Google Display Platform	80%	191	80%	86	-0.13	0.90

Notes & Sources:

From Lower-Spend Advertiser Survey.

[1] Respondents who, in Q9, indicated that they would divert advertising spending as a response to an increase in the cost of display advertising.

[2] Respondents who, in QS12, indicated that they have used more than one type of digital advertising in the past year.

[3] Respondents who, in Q4, selected more than one display platform. Count excludes Ad Step Technologies, which was a decoy answer option.

[4] Respondents who, in Q4, indicated using Google Ads, and who selected at least one non-Google display platform. Count excludes Ad Step Technologies which was a decoy answer option.

[B]-[C] Full respondent sample.

[D]-[E] Limited to respondents with an annual ad spend of less than $50,000.

[F] Significance tests reflect the difference in the survey results in columns [B] and [D]. The z-scores are based on a two-tailed test with $z = (p_1 - p_2) / \text{sqrt} (p_1 \times (1 - p_1) / n_1 + p_2 \times (1 - p_2) / n_2)$; a z-score of ±1.96, for example, corresponds to a significance at the 95% confidence level. One asterisk (*) denotes significance at the 0.1 level with p<0.1 and two asterisks (**) denote significance at the 0.05 level with p <0.05.

[G] Reflects significance levels of the difference of percentages in [B] and [D].

EXHIBIT 108

HIGHER-SPEND ADVERTISER SURVEY
COMPARISON OF RESPONDENTS WHO WOULD DIVERT VS. WOULD NOT DIVERT SPENDING IN RESPONSE TO PROGRAMMATIC DISPLAY COST INCREASE

	Respondent Subgroup	Would Divert Spending in Q5 (N = 295)	Would Not Divert Spending in Q5 (N = 179)
	[A]	[B]	[C]
	Age		
[1]	18 - 34	22.0%	16.2%
[2]	35 - 49	65.4%	72.6%
[3]	50 - 64	12.5%	11.2%
[4]	65 or above	-	-
	Gender		
[5]	Female	29.8%	19.0%
[6]	Male	70.2%	81.0%
	Percent of Advertising Budget Spent on Digital		
[7]	Average	66.5%	64.1%
[8]	Median	68.0%	65.0%
	Annual Ad Spend		
[9]	$500,000 to less than $1 million	6.4%	5.0%
[10]	$1 million to less than $3 million	14.6%	16.8%
[11]	$3 million to less than $7 million	10.8%	11.7%
[12]	$7 million to less than $15 million	19.3%	14.5%
[13]	$15 million to less than $30 million	15.3%	14.0%
[14]	$30 million to less than $50 million	12.9%	15.6%
[15]	$50 million to less than $100 million	8.5%	8.9%
[16]	$100 million to less than $250 million	6.8%	6.7%
[17]	$250 million to less than $500 million	3.4%	5.0%
[18]	$500 million or more	2.0%	1.7%

EXHIBIT 108

HIGHER-SPEND ADVERTISER SURVEY
COMPARISON OF RESPONDENTS WHO WOULD DIVERT VS. WOULD NOT DIVERT SPENDING IN RESPONSE TO PROGRAMMATIC DISPLAY COST INCREASE

	Respondent Subgroup	Would Divert Spending in Q5 (N = 295)	Would Not Divert Spending in Q5 (N = 179)
	[A]	[B]	[C]
	Advertising Types Used		
[19]	Search	82.0%	63.1%
[20]	Display	100.0%	100.0%
[21]	Email	69.5%	46.4%
[22]	Digital Audio	46.4%	33.5%
[23]	Social	84.1%	63.1%
[24]	App/In-App	52.9%	34.6%
[25]	Digital Video	72.2%	55.3%
[26]	Connected TV	52.9%	40.2%
[27]	eCommerce	61.7%	45.8%
[28]	Other	0.7%	-
[29]	***Average Number of Advertising Types Used***	6.2	4.8
	Use of Direct Deals		
[30]	Uses Direct Deals	65.4%	52.5%
[31]	Does Not Use Direct Deals	34.6%	47.5%
	Use of Ad Agency		
[32]	Uses Ad Agency	73.6%	60.3%
[33]	Does Not Use Ad Agency	26.1%	39.7%
[34]	***Average % of Digital Budget Allocated to Programmatic Display***	21.1%	40.5%
[35]	***Use of Multiple Ad Buying Tools***	85.1%	60.9%
	Metrics Used to Measure Performance of Programmatic Display		
[36]	ROI	50.5%	44.7%
[37]	ROAS	49.5%	43.0%

EXHIBIT 108

HIGHER-SPEND ADVERTISER SURVEY
COMPARISON OF RESPONDENTS WHO WOULD DIVERT VS. WOULD NOT DIVERT SPENDING IN RESPONSE TO PROGRAMMATIC DISPLAY COST INCREASE

	Respondent Subgroup	Would Divert Spending in Q5 (N = 295)	Would Not Divert Spending in Q5 (N = 179)
	[A]	[B]	[C]
	Frequency of Measuring Performance		
[38]	Daily	13.2%	10.6%
[39]	Weekly	34.6%	40.8%
[40]	Monthly	26.8%	28.5%
[41]	Quarterly	21.0%	15.6%
[42]	Annually	3.7%	3.9%
	Use of Experiments		
[43]	Has run experiments in past year	69.5%	42.5%
[44]	Has not run experiments in past year	27.1%	56.4%

Notes & Sources:
From Higher-Spend Advertiser Survey.
[B] Respondents who, in Q5, indicated that they would divert advertising spending as a response to an increase in the cost of programmatic display advertising.
[C] Respondents who, in Q5, indicated that they would not divert advertising spending as a response to an increase in the cost of programmatic display advertising.
[1]-[4] Computed based on responses to QS3.
[5]-[6] Computed based on responses to QS4.
[7]-[8] Computed based on responses to QS11.
[9]-[18] Computed based on responses to QS10.
[19]-[29] Computed based on responses to QS12.
[30]-[31] Computed based on responses to QS13.
[32]-[33] Computed based on responses to Q2.
[34] Computed based on responses to Q4.
[35] Computed based on responses to Q8.
[36]-[37] Computed based on responses to Q17.
[38]-[42] Computed based on responses to Q19.
[43]-[44] Computed based on responses to Q20.

EXHIBIT 109

LOWER-SPEND ADVERTISER SURVEY
COMPARISON OF RESPONDENTS WHO WOULD DIVERT VS. WOULD NOT DIVERT SPENDING IN RESPONSE TO DISPLAY COST INCREASE

	Respondent Subgroup	Would Divert Spending in Q9 (N = 185)	Would Not Divert Spending in Q9 (N = 103)
	[A]	[B]	[C]
	Age		
[1]	18 - 34	16.8%	19.4%
[2]	35 - 49	75.7%	75.7%
[3]	50 - 64	7.6%	4.9%
[4]	65 or above	-	-
	Gender		
[5]	Female	13.0%	19.4%
[6]	Male	87.0%	80.6%
	Percent of Advertising Budget Spent on Digital Advertising		
[7]	Average	63.7%	58.0%
[8]	Median	65.0%	60.0%
	Annual Ad Spend		
[9]	Less than $10,000	2.2%	1.0%
[10]	$10,000 to less than $25,000	23.2%	13.6%
[11]	$25,000 to less than $50,000	27.0%	21.4%
[12]	$50,000 to less than $100,000	14.1%	15.5%
[13]	$100,000 to less than $250,000	17.8%	23.3%
[14]	$250,000 to less than $500,000	15.7%	25.2%

EXHIBIT 109

LOWER-SPEND ADVERTISER SURVEY
COMPARISON OF RESPONDENTS WHO WOULD DIVERT VS. WOULD NOT DIVERT SPENDING IN RESPONSE TO DISPLAY COST INCREASE

	Respondent Subgroup	Would Divert Spending in Q9 (N = 185)	Would Not Divert Spending in Q9 (N = 103)
	[A]	[B]	[C]
	Advertising Types Used		
[15]	Search	68.1%	55.3%
[16]	Display	100.0%	100.0%
[17]	Email	48.6%	42.7%
[18]	Digital Audio	45.9%	40.8%
[19]	Social	74.6%	60.2%
[20]	App/In-App	41.1%	38.8%
[21]	Digital Video	55.1%	51.5%
[22]	Connected TV	37.8%	38.8%
[23]	eCommerce	47.6%	40.8%
[24]	Other	0.5%	-
[25]	***Average Number of Advertising Types Used***	5.2	4.7
	Use of Ad Agency		
[26]	Uses Agency	76.2%	51.5%
[27]	Does Not Use Agency	23.8%	48.5%
[28]	***Average % of Digital Budget Allocated to Display***	29.0%	40.3%
[29]	***Use of Multiple Display Platforms***	89.7%	64.1%
	Metrics Used to Measure Performance of Display		
[30]	ROI	43.8%	32.0%
[31]	ROAS	33.0%	35.0%

EXHIBIT 109

LOWER-SPEND ADVERTISER SURVEY
COMPARISON OF RESPONDENTS WHO WOULD DIVERT VS. WOULD NOT DIVERT SPENDING IN RESPONSE TO DISPLAY COST INCREASE

	Respondent Subgroup	Would Divert Spending in Q9 (N = 185)	Would Not Divert Spending in Q9 (N = 103)
	[A]	[B]	[C]
	Frequency of Measuring Performance		
[32]	Daily	8.6%	10.7%
[33]	Weekly	41.1%	39.8%
[34]	Monthly	34.1%	29.1%
[35]	Quarterly	12.4%	19.4%
[36]	Annually	3.8%	1.0%
	Use of Experiments		
[37]	Has run experiments in past year	74.1%	35.9%
[38]	Has not run experiments in past year	24.9%	63.1%

Notes & Sources:
From Lower-Spend Advertiser Survey.
[B] Respondents who, in Q9, indicated that they would divert advertising spending as a response to an increase in the cost of display advertising.
[C] Respondents who, in Q9, indicated that they would not divert advertising spending as a response to an increase in the cost of display advertising.
[1]-[4] Computed based on responses to QS3.
[5]-[6] Computed based on responses to QS4.
[7]-[8] Computed based on responses to QS11.
[9]-[14] Computed based on responses to QS10.
[15]-[25] Computed based on responses to QS12.
[26]-[27] Computed based on responses to Q2.
[28] Computed based on responses to Q8.
[29] Computed based on responses to Q4.
[30]-[31] Computed based on responses to Q12.
[32]-[36] Computed based on responses to Q14.
[37]-[38] Computed based on responses to Q15.

EXHIBIT 110

AGENCY SURVEY
COMPARISON OF RESPONDENTS WHO WOULD DIVERT VS. WOULD NOT DIVERT SPENDING IN RESPONSE TO PROGRAMMATIC DISPLAY COST INCREASE

	Respondent Subgroup	Would Divert Spending in Q4 (N = 206)	Would Not Divert Spending in Q4 (N = 156)
	[A]	[B]	[C]
	Age		
[1]	18 - 34	29.6%	17.3%
[2]	35 - 49	58.7%	68.6%
[3]	50 - 64	11.2%	14.1%
[4]	65 or above	0.5%	-
	Gender		
[5]	Female	31.1%	31.4%
[6]	Male	68.9%	67.9%
	Percent of Advertising Budget Spent on Digital		
[7]	Average	65.8%	62.4%
[8]	Median	70.0%	60.0%
	Annual Ad Spend		
[9]	$50,000 to less than $100,000	1.9%	0.6%
[10]	$100,000 to less than $250,000	2.4%	0.6%
[11]	$250,000 to less than $500,000	2.4%	0.6%
[12]	$500,000 to less than $1 million	8.7%	6.4%
[13]	$1 million to less than $3 million	13.1%	10.3%
[14]	$3 million to less than $7 million	16.5%	20.5%
[15]	$7 million to less than $15 million	12.1%	12.8%
[16]	$15 million to less than $30 million	15.5%	20.5%
[17]	$30 million to less than $50 million	7.3%	14.7%
[18]	$50 million to less than $100 million	6.3%	3.2%
[19]	$100 million to less than $250 million	8.7%	3.8%
[20]	$250 million to less than $500 million	2.4%	2.6%
[21]	$500 million or more	1.9%	3.2%

EXHIBIT 110

AGENCY SURVEY
COMPARISON OF RESPONDENTS WHO WOULD DIVERT VS. WOULD NOT DIVERT SPENDING IN RESPONSE TO PROGRAMMATIC DISPLAY COST INCREASE

	Respondent Subgroup	Would Divert Spending in Q4 (N = 206)	Would Not Divert Spending in Q4 (N = 156)
	[A]	[B]	[C]
	Advertising Types Used		
[22]	Search	77.2%	54.5%
[23]	Display	100.0%	100.0%
[24]	Email	52.4%	46.2%
[25]	Digital Audio	52.4%	26.3%
[26]	Social	85.4%	66.7%
[27]	App/In-App	45.6%	43.6%
[28]	Digital Video	73.8%	51.3%
[29]	Connected TV	59.2%	32.7%
[30]	eCommerce	52.9%	45.5%
[31]	Other	1.0%	-
[32]	***Average Number of Advertising Types Used***	6.0	4.7
	Use of Direct Deals		
[33]	Uses Direct Deals	52.4%	39.1%
[34]	Does Not Use Direct Deals	47.6%	60.9%
[35]	***Average % of Digital Budget Allocated to Programmatic Display***	23.6%	41.1%
[36]	***Use of Multiple Ad Buying Tools***	78.2%	66.7%
	Metrics Used to Measure Performance of Programmatic Display		
[37]	ROI	53.4%	35.9%
[38]	ROAS	48.5%	40.4%

EXHIBIT 110

AGENCY SURVEY
COMPARISON OF RESPONDENTS WHO WOULD DIVERT VS. WOULD NOT DIVERT SPENDING IN RESPONSE TO PROGRAMMATIC DISPLAY COST INCREASE

	Respondent Subgroup	Would Divert Spending in Q4 (N = 206)	Would Not Divert Spending in Q4 (N = 156)
	[A]	[B]	[C]
	Frequency of Measuring Performance		
[39]	Daily	6.3%	12.2%
[40]	Weekly	41.7%	34.6%
[41]	Monthly	34.5%	33.3%
[42]	Quarterly	13.6%	16.0%
[43]	Annually	3.9%	3.8%
	Use of Experiments		
[44]	Has run experiments in past year	68.9%	52.6%
[45]	Has not run experiments in past year	26.7%	45.5%

Notes & Sources:
From Agency Survey.
[B] Respondents who, in Q4, indicated that they would divert advertising spending for the client they spend the most time on as a response to an increase in the cost of programmatic display advertising.
[C] Respondents who, in Q4, indicated that they would not divert not advertising spending for the client they spend the most time on as a response to an increase in the cost of programmatic display advertising.
[1]-[4] Computed based on responses to QS3.
[5]-[6] Computed based on responses to QS4.
[7]-[8] Computed based on responses to QS13.
[9]-[21] Computed based on responses to QS12.
[22]-[32] Computed based on responses to QS14.
[33]-[34] Computed based on responses to QS15.
[35] Computed based on responses to Q3.
[36] Computed based on responses to Q7.
[37]-[38] Computed based on responses to Q16.
[39]-[43] Computed based on responses to Q18.
[44]-[45] Computed based on responses to Q19.

APPENDIX A
CV

Itamar Simonson

ADDRESSES April 2024

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EDUCATION

Ph.D.	Duke University, Fuqua School of Business Major: Marketing; May 1987
M.B.A.	UCLA, Graduate School of Management Major: Marketing; March 1978
B.A.	Hebrew University, Jerusalem, Israel Major: Economics, Political Science; August 1976

ACADEMIC POSITIONS

July 1987 - June 1993	University of California, Berkeley Haas School of Business Assistant Professor
July 1993 – Aug. 1996	Stanford Graduate School of Business Associate Professor of Marketing
Sept. 1996 – Aug. 1999	Stanford Graduate School of Business Professor of Marketing
Sept. 1999 – Dec. 2020	Stanford Graduate School of Business Sebastian S. Kresge Professor of Marketing
Jan. 2021 – Present	Stanford Graduate School of Business Sebastian S. Kresge Emeritus Professor of Marketing
1994 – 2000	Stanford Graduate School of Business Marketing Group Head
2000, 2004, 2012	Visiting Professor of Marketing: MIT; NYU; Columbia

AWARDS

- Best Article in the *Journal of Consumer Research* during the period 1987-1989.
- The 1997 O'Dell Award (for the *Journal of Marketing Research* article that has had the greatest impact on the marketing field in the previous five years).
- The 2001 O'Dell Award.
- Honorary Doctorate: University of Paris II – Sorbonne Universities.
- The American Marketing Association Best Book in Marketing Award.
- Elected Fellow of the Association for Consumer Research.
- The 2007 Society for Consumer Psychology Distinguished Scientific Achievement Award.
- Finalist for the O'Dell Award: 1995; 2002; 2004; 2005; 2007; 2008; 2012.
- Best Article in the *Journal of Public Policy & Marketing* during the period 1993-1995.
- The 2016 Association for Consumer Research Conference Best Paper Award.
- The 2002 American Marketing Association Award for the Best Article on Services Marketing.
- The Association for Consumer Research 1990 "Ferber Award."
- Finalist for the 2003 Paul Green Award (for the *Journal of Marketing Research* article with the greatest potential to contribute to the practice of marketing research).
- Runner-up for the 2005 *Journal of Consumer Research* Best Article Award.
- Winner in the Marketing Science Institute and Direct Marketing Association competition on "Understanding and Measuring the Effect of Direct Marketing."
- Runner-up for the 1993 *California Management Review* Best Article Award.
- National Science Foundation Grant (for 1996-8).
- Outstanding Reviewer Award, *Journal of Consumer Research*, 2005, 2009.
- Honorable Mention for the Sloan Executive Program Teaching Award.

TEACHING EXPERIENCE

Stanford University:

Marketing Management (for MBAs and the Sloan Executive Program)
Marketing to Businesses (for MBAs); Technology Marketing (for MBAs)
Critical Analytical Thinking (for MBAs)
Research Methods for Studying Consumer Behavior (a Ph.D. Course)
Applied Behavioral Economics (at the MBA and Ph.D. levels)
Buyer Behavior (a Ph.D. course)

University Of California, Berkeley:

MBA, Ph.D. and Executive Education Classes on Marketing Management and Consumer Behavior.

BUSINESS EXPERIENCE

October 1978-August 1983 Motorola, Inc.
Worked in an international subsidiary; responsibilities included marketing research and customer analysis, customer surveys, definition of new products, pricing, analysis of sales force performance, competitive intelligence, and forecasting. Conducted studies of consumers and markets for various communications products. Last two years served as Product Marketing Manager for communications products.

Consulting:

Consulted for clients from a wide range of industries such as technology, communications, services, and manufacturing sectors.
Expert witness assignments: surveys, trademarks, branding, impact of product features, antitrust surveys, deceptive advertising, consumer behavior, marketing management, retailing, class actions, assessment of demand drivers, and other marketing and decision making issues.

PUBLICATIONS

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Franklin Shaddy, Ayelet Fishbach, and Itamar Simonson, “Why Invoking the Self Attenuates Variety Seeking, the Compromise Effect, and Balancing.” (Revised for resubmission)

Wendy Liu and Itamar Simonson, “Shortlisting – Not Overwhelmed But Biased.” (Revised for resubmission)

Aner Sela and Itamar Simonson, “The Feeling of Preference: Preference Expression in the Absence of Preferences.” (Revised for resubmission)

Jen Park and Itamar Simonson, “Rejection and Closure: Why Options that Survive Rejection Are More Attractive.”

Doctoral Dissertations Chaired:

Ravi Dhar (Chaired Professor, Yale U.)
Aimee Drolet (Chaired Professor, UCLA)
Stephen Nowlis (Chaired Professor, Washington U., St. Louis)
Ziv Carmon (Chaired Professor, INSEAD)
Ran Kivetz (Chaired Professor, Columbia U.)
Donnel Briley (Professor, U.O. Sydney)
Thomas Kramer (Professor, U.O. California, Riverside)
Wendy Liu (Professor, U.O. California, San Diego)

Sanjay Sood (Professor, UCLA)
Song-Oh Yoon (Professor, Korea University)
Michal Maimaran (Clinical Professor, Kellogg School)
Leilei Gao (Professor, Chinese University, Hong Kong)
Wendy De La Rosa (Assistant Professor, Wharton School, U.O. Penn.)
Aner Sela (Professor, U. O. Florida)
Jonah Berger (Associate Professor, Wharton School, U.O. Penn.)
Jen Park (Assistant Professor, University of British Columbia)

EDITORIAL ACTIVITIES

Co-Editor of *Consumer Psychology Review*

Editorial Boards: *Journal of Marketing Research, Journal of Consumer Psychology, Journal of Consumer Research, International Journal of Research in Marketing, Journal of Marketing in Emerging Economies, Marketing Letters*, *Journal of Academy of Marketing Science*, *Review of Marketing Research*.

Reviewer for *Marketing Science, Journal of Behavioral Decision Making, Science, Management Science, Journal of Retailing and Consumer Services, Journal of Marketing, Journal of Retailing, Organizational Behavior and Human Decision Processes, Journal of Experimental Psychology, Psychological Review, Psychological Bulletin, Journal of Personality and Social Psychology, Psychological Science, California Management Review, Journal of Economic Psychology*, *European Journal of Social Psychology, Journal of Judgment and Decision Making, Medical Decision Making,* and National Science Foundation.

PROFESSIONAL AFFILIATIONS

Association for Consumer Research
Judgment and Decision Making Society

APPENDIX B
TESTIMONY LIST

Cases in which Dr. Itamar Simonson Testified as an Expert at Trial or by Deposition in the Past Ten Years

1. Nike, Inc. v. StockX LLC (SDNY; 22-cv-983-VEC) (Deposition).
2. Mark Patane et al. v. Nestle Waters North America, Inc. (USDC of CT; 3:17- CV-01381) (Deposition).
3. Promotion In Motion v. Haribo America (Dist. of NJ; 19-cv-14183-MCA- LDW) (Deposition).
4. MGFB Properties, Inc. et al. v. Viacom, Inc. et al. (Nor. Dist. FL; 5:19-00257) (Deposition).
5. American Eagle Outfitters v. Walmart (W.D. of PA; 2:20-cv-00412) (Deposition).
6. The People of the State of California v. Macy’s Inc. (Superior Court of CA, County of Los Angeles; BC643040) (Trial).
7. Fujifilm North America Corp. v. Polaroid, IP (SDNY; 1:17-cv-08796) (Deposition).
8. In the Matter of Certain Portable Battery Jump Starters (ITC; Inv. # 337-TA- 1360) (Trial).
9. Jerome’s Furniture Warehouse v. Ashley Furniture Industries (South. Dist. CA; 20-cv-1765) (Deposition).
10. Warner Bros. Entertainment v. Random Tuesday, Inc. (Cent. Dist. CA; 2:20-cv-02416) (Deposition).
11. Delta Air Lines, Inc. v. Marriott International (Nor. Dist. of GA; 1:20-01125) (Deposition).
12. Stitch, Ltd. v. TikTok, Inc. (SD-CA; 3:21-cv-00626) (Trial).
13. Koss Corp. v. Apple Inc. (WDTX; 6:20-cv-00665) (Deposition).
14. Margarita Delgado, et al. v. Ocwen Loan Servicing et al. (East. Dist. of NY; 1:13-cv-04427) (Deposition).
15. Thrive Natural Care v. Thrive Causemetics (Cent. Dist. of CA; 2:20-cv-9091- PA-AS) (Deposition).
16. Contour IP v. GoPro, Inc. (N.D. of CA; 21-cv-2143) (Deposition).
17. Burnett, Camp, et al. v. Conseco Life Insurance (So. Dist. of Indiana; 1:18-cv-00200-JPH-DML) (Deposition).

18. *In Re. Distribution of Cable Royalty Funds* (Testified at trial on behalf of the Public Television Claimants Before the Cable Royalty Judges; Washington, D.C.).
19. Ericsson Inc. v. Apple Inc. (EDTX, Marshall Div.; 2:21-cv-336 (Deposition).
20. New Chapter, Inc. v. Advanced Nutrition, Inc. (EDNY; 22-cv-37-34) (Deposition).
21. G+ Communications, LLC v. Samsung Electronics Co. (ED-TX; 2-22-cv-78) (Deposition).
22. Duracell U. S. Operations v. Energizer Brands (SDNY; 1:20-cv-07318) (Depositions).
23. IPA Technologies Inc. v. Amazon.com, Inc. (Dist. of Delaware; 1:16-cv-01266-RGA) (Deposition).
24. Rovi Guides, Inc. v. Videotron LTD. (Federal Court, Ottawa; Docket T-921-17) (Trial).
25. Federal Trade Commission v. LendingClub Corp. (Nor. Dist. Of CA; 3:18-cv-02454-JSC) (Deposition).
26. ID Tech v. Samsung Electronics (Cent. Dist. of CA.; 8:17-cv-01748) (Deposition).
27. Instagram, LLC v. Instagoods Pty Ltd (USPTO, Application no.: 88923261) (Deposition).
28. Willis Electric Co. v. Polygroup Trading Ltd. (US Dist. Of Minnesota; 5-cv- 3443) (Trial).
29. Innovation Sciences v. Amazon.com et al. (East. Dist. of TX, Sherman Div.; 4:18-cv-00474) (Deposition).
30. Strategic Partners, Inc. v. Figs, Inc. (CD-CA; 2:19-cv-02286) (Trial).
31. Re. Apple iPhone Antitrust litigation (Nor. Dist. CA, Oakland Div.; 4:11-cv- 06714-YG) (Deposition).
32. Monster Energy Company v. BeastUp LLC (East. Dist. of CA; 17cv1605 KJM-JDP) (Trial).
33. The People of the State of California v. HRB Tax Group et al. (Superior Court, County of LA; 19STCV15742) (Deposition).
34. Apple Inc. v. The USPTO (E.D. of VA; 1-22-cv-1231-MSN) (Deposition).
35. Jackpocket, Inc. v. LottoMatrix NY LLC et al. (SDNY; 22-cv-05772) (Deposition).
36. Veterinary Hospital Managers Association, Inc., v. Eastern States Veterinary Association, Inc. (USPTO, Ser. No. 88/850,803) (Deposition).

37. GeoTag, Inc. v. AT&T et al. (Nor. Dist. of Texas, Dallas Div.; 2:10-CV-57O) (Deposition).

38. Poquito Mas Licensing Corp. v. Taco Bell Corp. (Cent. Dist. of CA; 8:13-CV-01933) (Deposition).

39. Whirlpool Corp. Front-Loading Washer Products Liability Litigation (Nor. Dist. Ohio; 1:08-wp-65000; MDL 2001) (Trial).

40. Playtex Products, LLC v. Munchkin, Inc. (Cent. Dist. CA; CASE NO. CV 11- 0503 AHM (RZX) (Trial).

41. SRI International, Inc. v. Cisco Systems, Inc. (US Dist. of Del., 13-1534) (Deposition).

42. Fage Dairy Processing Industry, S.A. v. General Mills, Inc. (Nort. Dist. of NY; 6:11-cv-01174) (Deposition).

43. Fox Broadcasting Company et al. v. Dish Network (Cent. Dist. of CA; 12- 04529) (Deposition).

44. Skye Astiana et al. v. Kashi Company (South. dist. of CA; 11-CV-1967-HBGS) (Deposition).

45. Bank of America v. Trilegiant Corp. & Affinion Group (Arbitration, Reference # 01-14-0000-4517) (Arbitration testimony).

46. Larry Butler et al. v. Sears, Roebuck and Co. (Nor. Dist. of IL, Eastern Div., 06-CV-7-23) (Deposition).

47. Car Freshner v. Exotica Fresheners (SDNY; 14-CV-391) (Trial).

48. Laura McCabe et al. v. Six Continents Hotels, Inc. (No. Dist. of CA, SF Div., 12–cv–04818 NC) (Deposition).

49. RPI v. Apple Inc. (No. Dist. of NY, Albany Div.; 1:13-CV-633) (Deposition).

50. WNET, ABC et al. (Broadcast networks) v. Aereo, Inc. (SDNY; 12-cv-1540) (Deposition).

51. Western Sugar Cooperative et al. v. Archer-Daniels-Midland Company et al. (Cent. Dist. of CA, CV11-3473-CBM) (Trial).

52. Sazerac Company, Inc. v. Fetzer Vineyard, Inc. (N. D. of CA; 3:15-cv-04618) (Trial).

53. Lena Thodos et al. v. Nicor, Inc. et al. (Circuit Ct. of Cook County, IL, Chancery Div.; 11 CH06556) (Deposition).

54. Christopher Corcoran et al. v. CVS Pharmacy (Nor. Dis. of CA; 15-CV-3504) (Deposition).

55. Intellectual Ventures II v. AT&T Mobility et al. (Dist. of Del.; 13-cv-1631) (Deposition).

56. Lights Out Holdings and Shawne Merriman v. Nike, Inc. (South. Dist. Of CA, 3:14-cv- 00872-JAH-NLS) (Deposition).

57. Koninklijke Philips Electronics N.V. v. Hunt Control Systems (Dist. of NJ, 11-03684) (Trial).

58. Valador, Inc. v. HTC Corp. (East. Dist. of VA; 1:16-cv-1162) (Deposition).

59. Beaulieu Group v. Mohawk Industries (N. D. of Georgia, Rome Div.; 4:15 – cv-00124) (Deposition).

60. Adidas America, Inc. et al. v. Skechers USA, Inc. (Dist. of Oregon, Portland Div.; 3:15-cv-01741) (Deposition).

61. B Property Management, Inc., et al. v. Goodman Global (Middle Dist. of FL; 3:12-CV-1366-HES-JBT) and Anne McVicar et al., v. Goodman Global (Cent. Dist. of CA; 8:13-cv-13-01223-DOC-RNB) (Deposition).

62. Exxon Mobil Corp. v. FX Networks et al. (South. Dist. of TX; 4:13– CV– 02906) (Deposition)

63. Car Freshner Corp. v. Crocs, Inc. (Nor. Dist. of NY; 7:16-cv-0068) (Deposition).

64. Jack Daniel's Properties v. VIP (US Dist. of Ariz., CV 14-02057) (Trial).

65. Versata Software, Inc. v. Zoho Corp. (W.D. Texas; 1:13-00371) (Deposition).

66. Oracle America, Inc. v. Google Inc. (No. Dist. of CA; C 10-03561) (Deposition).

67. TrueCar, Inc. v. Sonic Automotive, Inc. (Cent. Dist. of CA, West. Div.; 13-cv-05812) (Deposition).

68. World Trade Centers Association, Inc. v. The Port Authority of New York and New Jersey (So. Dist. of NY; 15-cv-7411) (Deposition).

69. TCL Communication Technology Holdings v. Telefonaktoebol LM Ericsson, et al. (Cent. Dist. of CA, 8:14-CV-00341 JVS-DFMx) (Trial).

70. (on behalf of Sound Exchange) In the Matter of Determination of Rates and Terms for Preexisting Subscription Services and Satellite Digital Audio Radio Services (United States Copyright Judges, Washington, D.C., trial).

71. Adidas America, Inc. et al. v. TRB Acquisitions et al. (Dist. of Oregon; 3:15- cv-02113-SI) (Deposition).

72. THX LTD. v. Apple Inc. (Nor. Dist. of CA; 3:16-cv-01161) (Deposition).

73. Price, et al. v. L'Oreal USA, Inc., et al. (S.D.N.Y.; 1:17-cv-00614) (Deposition).
74. San Diego County Credit Union v. Citizens Equity First Credit Union (S.D. Cal.; 18-cv-967) (Trial).
75. Maldonado v. Apple, Inc. (N.D. Cal.; 3:16-cv-04067) (Deposition).
76. McMorrow v. Mondelez International, Inc. (S.D. Cal.; 17-cv-2327) (Deposition).
77. Black Card, LLC v. Visa U.S.A., Inc. (D. Wyo.; 2:15-cv-00027) (Trial).
78. Hadley v. Kellogg Sales Company (N.D. Cal.; 16-CV-04955) (Deposition).
79. Combe Inc. v. Dr. August Wolff GmBH & Co. (E.D. Va.; 1:17-cv-00935) (Deposition).
80. Schechner v. Whirlpool Corporation (E.D. Mich.; 2:16-cv-12409) (Deposition).
81. Fitzhenry-Russell v. Keurig Dr. Pepper Inc. (N.D. Cal.; 5:17-cv-00564) (Deposition).
82. Cross-Fit, Inc. v. National Strength and Conditioning Association (S.D. Cal.; 14-cv-1191) (Deposition).
83. Morales v. Kraft Foods Group, Inc. (C.D. Cal.; 14-cv-04387) (Deposition).
84. Exxon Mobil Corp. v. FX Networks et al. (S.D. Tex.; 4:13-cv-02906) (Deposition).
85. State of Arizona et al. v. Volkswagen AG et al. (Sup. Ct. of Ariz., Maricopa County; 16-cv-005112) (Deposition).
86. Saxon Glass Technologies v. Apple Inc. (W.D.N.Y.; 1:15-cv-00581) (Deposition).
87. Tempur-Pedic NA et al. v. Mattress Firm (S.D. Tex.; 4:17-cv-1068) (Deposition).
88. RingCentral, Inc. v. Nextiva, Inc. (N.D. Cal.; 5:19-cv-02626) (Deposition).
89. Droplets, Inc. v. Yahoo, Inc. (N.D. Cal.; 12-cv-03733) (Deposition).
90. Thomas Luca v. Wyndham Worldwide et al. (W.D. Pa.; 2:16-cv-00746) (Deposition).
91. Smith-Brown et al. v. Ulta Beauty, Inc. et al. (N.D. Ill.; 1:18-cv-610) (Deposition).
92. William Brady v. Bayer et al. (Cal. Superior Court, Orange County; 0-2016-00839608-CU-MC-CXC) (Deposition).
93. Sprint Spectrum et al. v. AT&T Mobility (S.D.N.Y.; 19-cv-1215) (Deposition).

94. Jill Hennessey v. Kohl's Corp. (E.D. Mo.; 4:19-01866) (Deposition).
95. Maxell, Ltd. v. Apple Inc. (E.D. Tex.; 5:19-cv-0036) (Deposition).
96. Polaris PowerLED Technologies v. Samsung Electronics America et al. (E.D. Tex.; 2-17-cv-00715) (Deposition).
97. Apple Inc. v. Qualcomm Inc. (S.D. Cal.; 17-cv-0108 & 3:17-cv-1375) (Depositions).
98. Milan et al. v. Clif Bar & Company (N.D. Cal.; 18-02354) (Deposition).
99. ICON Health & Fitness v. Nautilus, Inc. (D. Utah; 1-17-cv-00164-DAK) (Deposition).
100. CFA Institute v. American Retirement Association (W.D. Va.; 3:19-cv-00012) (Deposition).
101. Social Technologies v. Apple Inc. (N.D. Cal.; 3:18-cv-05945-VC) (Deposition).
102. American Airlines v. Delta Airlines (N.D. Tex.; 4:19-cv-01053-O) (Deposition).
103. Re: MacBook Keyboard Litigation (N.D. Cal.; 5:18-cv-02813-EJD-VKD) (Deposition).
104. Simmons et al. v. Ford Motor Company (S.D. Fla.; 18-cv-81558-RAR) (Deposition).
105. (on behalf of Sound Exchange) Determination of Royalty Rates and Terms for Ephemeral Recording and Digital Performance of Sound Recordings (Web V) (United States Copyright Judges, Washington, D.C.; 14-CRB-0001-WR) (Trial).
106. Federal Trade Commission v. Meta Platforms (US Dist. Of Columbia; 20-cv-03590) (Deposition).
107. Apollo Health and Beauty Care v. Sol de Janeiro IP, Inc. (S.D.N.Y; 22-cv-07719) (Deposition).
108. I-META Holdings, Inc., v. Meta Platforms, Inc., (Eighth Judicial District Court, Clark County, Nevada; A-23-877867-B (PI Hearing).
109. Apple, Inc. v. Masimo Corporation (D. Del.; 22-cv-1378) (Deposition).
110. United States, et al. v. Google, LLC (E.D. Virginia; 23-cv-00108) (Deposition).
111. Simmons et al. v. Ford Motor Company (S.D. FL; 18-cv-81558-RAR) (Deposition).
112. SEVEN Networks v. Motorola Mobility (Nor. Dist. of TX, Dallas Div.; 3:21-cv-1036) (Deposition).
113. In re: HomeAdvisor, Inc. Litigation (16-CV-01849-PAB-KLM) (Deposition).

APPENDIX C
DOCUMENTS RELIED UPON

Bates Ranges		
GOOG-AT-MDL-001272416	–	GOOG-AT-MDL-001272493
GOOG-AT-MDL-002038336	–	GOOG-AT-MDL-002038380
GOOG-AT-MDL-008928829	–	GOOG-AT-MDL-008928914
GOOG-DOJ-11021167	–	GOOG-DOJ-11021216
GOOG-DOJ-AT-00748293	–	GOOG-DOJ-AT-00748396
GOOG-DOJ-AT-00839664	–	GOOG-DOJ-AT-00839764
GOOG-DOJ-AT-02524665	–	GOOG-DOJ-AT-02524749

Case Materials and Legal Documents:
Complaint, *United States of America, et al. v. Google LLC*, Case 1:23-cv-00108, January 24, 2023.
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Simon Prop. Grp. L.P. v. mySimon, Inc., 104 F. Supp. 2d 1033 (S.D. Ind. 2000).
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APPENDIX D

PRELIMINARY INTERVIEW GUIDE

Preliminary Interview Guide

1. Introduction

Hello, am I speaking to [FIRST NAME]?

My name is [NAME] and I will be interviewing you. Thank you for agreeing to speak with me today.

This interview is not being recorded. I have not been told your identity, including the company you work for. I only know your job title and the industry category you work in. <u>All information you provide will be analyzed across the entire sample of interviews</u>.

This interview is being conducted by consultants that have been retained on behalf of Google in connection with pending antitrust lawsuits in which the plaintiffs allege that Google engaged in anticompetitive conduct related to digital advertising. Based on our research, we understand that your company is not a participant in those lawsuits. We are interviewing people who work in advertising and would like to ask you some questions about your work. Would you be willing to participate in this interview?

As we go through, please let me know if any of my questions are unclear or if I use any terms you are unfamiliar with.

I will ask you about several different topics. If I start asking about any topics that don't apply to you or your company, please just let me know and I can move on to the next topic.

When answering, please give as much detail as possible. However, if you do not know the answer, that is okay -- just let me know.

Do you have any questions before I begin?

2. General Background

1. Do you work in a particular group or area within your company? What group or area is that?
    a. How is your advertising group organized? Does it, e.g., cover specific products, customer segments, etc.?
2. How would you describe your current role?
3. How long have you been in this role? How long have you worked on digital advertising over the course of your career?
4. In your current role, what, if any, responsibilities do you have with respect to digital advertising?
5. If you know, roughly what share or percentage of your ad spending is on digital, online advertising vs. offline advertising?
6. How would you describe the role you play in deciding how advertising dollars are spent? What are your specific responsibilities?
7. Do you work with advertising agencies for digital advertising?

a. *[If yes:]* From your perspective, what would you describe as the purpose of working with advertising agencies? What types of tasks or goals do you expect from them versus what do you keep in-house?

3. Advertising Channels and Usage

8. What do you think of as an "advertising campaign"?

9. Some advertisers but not others set advertising objectives based on the concept of the marketing funnel (i.e., awareness, preference, action). Do you set specific funnel objectives for each campaign?

10. Can you give me some examples of advertising campaigns you've run in the past year?

    a. *[For each of the first 3 campaigns mentioned, ask:]*

    b. What was your overall objective for the campaign?

    c. What kinds of media did you advertise on? *[By media, we mean: Digital, TV, print, radio, out-of-home, directories. If respondent is unsure/unclear, explain and ask them what term they would use to describe these categories.]*

11. Let's focus on your use of digital advertising. Which, if any, of the following digital advertising channels have you used over the past year?

    a. *[Allow respondents to answer, and probe for the below options if not already mentioned. For each channel the respondent mentions, ask how they define it.]*

    b. Display?

    c. Search?

    d. Social?

    e. Web?

    f. In-app?

    g. Is there anything else we haven't covered?

12. How do you use each of the digital advertising channels you just mentioned?

    a. *[Probe for each channel mentioned previously:]*

        i. Display

        ii. Search

        iii. Social

        iv. Web

        v. In-app

4. Budget and Spending Decisions and Process

13. Next, let's talk about budgeting and spending decisions. If I ask any questions that you don't know the answer to, just let me know.

14. What is your best estimate of the percentage of your digital advertising budget spent in each channel over the last 12 months? Please allocate 100% across these channels.

    a. *[List channels the respondent already indicated that they use and have them allocate 100% across these channels]*

15. Is your current budget/spending allocation roughly the same or different than last year?

    a. If the same: Why didn't you make changes? Was that a deliberate decision to keep the same allocation as before or did you just not see a reason to change?

    b. If different: What caused you to change the allocation of your spending across channels? Any other reasons for changing this allocation?

16. At a high level, how do you or those you work with decide how and where to spend advertising dollars?

    a. *[Allow respondent to answer however they wish. Follow up with potential additional questions to guide discussion:*

        i. Is there an overall advertising budget for your organization? How is that determined?

        ii. Is there a budget for your unit or group? How is that determined?

        iii. Is there a budget for digital advertising specifically? How is that determined?

        iv. Are there separate budgets for different digital ad channels? How are those determined?

        v. How, if at all, do you or those you work with decide how much to spend on a particular advertising campaign?

        vi. How, if at all, do you or those you work with decide how to allocate spending (e.g., across different types of advertising)?]

17. When deciding how to allocate your digital advertising budget, how many people participate in that decision?

18. How often do you revisit this budget allocation and consider when to make changes? Who is involved in those decisions?

19. Do you adjust spending during the course a campaign? Between campaigns? Why?

5. Display Advertising Terms and Usage

20. My next questions will focus in on display advertising. First, I'd like to understand a bit more about what you consider to be display advertising. How do you define display advertising?

    a. Does it include advertising on social media sites?

    b. Does it include in-app advertising?

    c. Does it include instream video advertising? Outstream video advertising?

    d. Does it include direct advertising or just programmatic advertising using third-party tools?

21. *[After respondent has explained how they define "display advertising"]* Thank you for explaining how you define the term display advertising. For the purposes of the rest of our interview, I will use "display advertising" to mean digital ads placed on websites that are not social media platforms. In my definition of "display advertising," I include only ads that are purchased programmatically, and do not include ads that are purchased directly from publishers. I do not include instream video ads or in-app ads. Please let me know if anything is unclear in any of the questions I ask.

22. Why do you use display advertising? In your view, what are the advantages relative to other forms of advertising?

23. Next, I am going to ask you some questions about what you view as alternatives to certain types of display advertising?

    a. Do you view social media advertising as an alternative for display advertising?

    b. Do you view in-app advertising as an alternative for display advertising?

    c. Do you view video display advertising as a substitute for static image display advertising?

    d. Do you view purchasing display ads directly from publishers as a substitute for purchasing display ads programmatically?

24. How have you bought display ads in the past 12 months?

    a. Have you bought display ads via direct deals with publishers?

    b. Have you bought display ads via programmatic methods?

    c. Have you bought display ads via private marketplaces?

    d. Have you bought display ads via open exchanges?

    e. *[If multiple:]* Why do you use each of these methods? Why would you choose one option over another?

25. *[If respondent indicates that they have purchased display ads via direct deals:]*

    a. What is your best estimate of the percentage of your spending on display ads in the past 12 months that was through direct deals with publishers?

b. Has this percentage stayed relatively constant over the past several 5 years, or has it changed?

i. *[If it has changed:]* How has it changed? Why?

c. Do you expect this percentage to be roughly the same or different in the coming year? Why?

d. In your view, what are the advantages and disadvantages of buying display ads directly vs. programmatically?

6. Multihoming (DSPs)

26. Next, let's talk about your use of different DSPs and buying tools. First, how do you define a demand side platform, or "DSP"?

27. How do you define a buying tool for display advertising? In your view, is a buying tool different from a DSP?

28. In the following questions, I will use the term "buying tool" to include both DSPs that can be used to buy open web display ads as well as user interfaces for buying ads on owned and operated platforms, such as Facebook.

29. In the past year, have you used one or more than one buying tool to buy digital ads?

a. Please list the buying tools you've used in the past year. *[Probe for: Google Ads, Google DV360, Criteo, The Trade Desk, Facebook, Amazon, TikTok]*

30. *[If respondent uses multiple buying tools:]* Roughly how many buying tools have you used to buy digital ads in the past year?

a. Do you expect to increase or decrease the number of buying tools you use in the coming year? What makes you say that?

b. Why do you use multiple buying tools, and for what purposes?

c. Are there advantages or disadvantages to using multiple buying tools?

d. Have you heard of self-competition related to using multiple buying tools? What does that mean to you?

e. Do you have any concerns about self-competition when using multiple buying tools?

f. Do you perceive that some buying tools have access to some consumers or publisher inventory that others don't have access to?

i. *[If yes:]* Is that one motivation behind using multiple buying tools?

g. If there were important publisher inventory that you felt you did not have good access to with the buying tools you are currently using, would you use another buying tool?

31. *[If respondent uses only one buying tool:]* Why do you use one buying tool instead of multiple?

a. Do you expect to use any additional buying tools in the coming year? What makes you say that?

b. If there were important publisher inventory that you felt you did not have good access to with the buying tool you are currently using, would you use another buying tool?

32. [If respondent uses Google Ads:]

a. What experiences or factors led you to start using Google Ads for display advertising?

b. What do you use Google Ads for? Do you use other DSPs for the same purpose?

33. [If respondent uses DV360:]

a. What do you use Google DV360 for? Do you use other DSPs for the same purpose?

34. Do you use the terms "DSP" and "exchanges" in the same way or do they mean different things?

a. *[[If different:]]* Do you or don't you choose specific exchanges?

b. *[[If they do:]]* What factors do you consider when choosing an exchange?

7. Measuring/Tracking Display Ad Performance

35. Next, let's talk about how you assess the performance of digital ads, and display ads in particular.

36. What metrics do you use to measure how well or poorly your display ads are performing?

a. *[Let respondent answer generally. Probe for specific metrics, such as: impressions, clicks, conversions, cost per impression, cost per click, cost per conversion, return on investment (ROI), return on ad spend (ROAS)]*

b. In your opinion, which metrics are the most informative?

37. Do the terms return on investment (ROI) and return on ad spend (ROAS) mean anything to you?

a. Do you measure ROI and/or ROAS? How?

b. What's the difference between ROI and ROAS?

c. How precise do you think those measurements are?

38. What factors do you consider in choosing…

a. Between web display ads vs. in-app ads?

b. Between display vs. social?

c. Between one buying tool vs. another buying tool?

d. Between direct vs. programmatic?

39. Do you run experiments to assess the performance of your display ads?

a. Generally, what types of experiments do you find to be most informative? Why?

b. Can you give some examples of experiments you've run in the past year?

c. *[For each:]* What did you find? How did that affect your advertising?

40. Do you monitor the performance of display ads while they are running?

    a. If so, how frequently do you check the performance?

    b. How do you use that information?

41. Do you measure performance of display ads after the campaign ends?

    a. If so, how do you use that information?

42. Do you compare performance across types of digital ads within a campaign? For example, do you ever compare performance of display ads with social media ads or search ads?

    a. Do you shift spending from one type of digital ad to another based on their relative performance?

        i. If so, when do you make those changes?

43. In the last 2 years, have you increased or decreased the amount you're spending on particular display ads based on their performance?

    a. If so, please give details as to what performance criteria triggered the change.

    b. If so, what changes have you made? Can you give an example?

    c. How, if at all, did those changes affect your spending on other advertising channels?

        i. Have you shifted spending to/from other advertising channels? If so, what channels and why?

            1. *[Probe for in-app, social media, other DSPs, purchasing channels (direct vs. programmatic)]*

            2. *[Probe for changes in formats, including between static and instream and outstream video]*

        ii. Have you experienced any difficulties in shifting spending across different advertising channels? If so, please describe.

    d. When have you made these changes? While the campaign is running? At the start of the next campaign?

44. Can you think of an example of a time when you were running a campaign and you noticed that the performance of your display ads had declined or was lower than you expected?

    a. *[If yes:]* How did you notice the decline in display ad performance? What performance metrics showed this?

    b. When did you notice the decline in display ad performance? [While the campaign was running? After the campaign concluded?]

    c. What, if anything, did you do about the decline in display ad performance?

    d. Did you change how much you were spending on those display ads? How?

i. *[If yes:]* Did you shift that spending somewhere else? If so, where?

1. *[Probe for in-app, social media, other DSPs, purchasing channels (direct vs. programmatic)]*

2. *[Probe for changes in formats, including between static and instream and outstream video]*

45. Let's talk about a hypothetical situation. Please imagine a situation in which you notice that the ROI of your programmatic display ads goes down by 5 percentage points. Assume that you have observed this trend across several campaigns, and the lower performance appears to be persistent.

a. Would you change how much you are spending on those programmatic display ads? What changes would you make?

b. *[If respondent says they would not change much:]* Suppose instead that the ROI of your programmatic display ads goes down by 10 percentage points. Would you change how much you are spending on those programmatic display ads?

c. *[If respondent says they would decrease spending on display ads:]* Would you shift that spending somewhere else? If so, where?

i. Direct ads?

ii. In-app ads?

iii. Social media ads?

iv. To a different format? For example, from static display to instream and/or outstream video ads?

d. Would you make any changes to your use of different ways of purchasing display ads? That is, would you change your allocation of spending on direct deals vs. programmatic?

8. Conclusion

46. That is all I have for you today. Thinking back on our conversation, is there anything else you want to mention or clarify further?

47. Thank you so much for your time.

APPENDIX E
PRETEST MODERATOR INSTRUCTIONS

Pretest Moderator Instructions

Instructions: The moderator's script is highlighted in grey. Instructions and cues for the moderator are in bold and all caps.

Section 1: Introduction & Questionnaire

Hello.

My name is ______. Thank you so much for agreeing to take this survey today. Please take the survey as you normally would. There is no correct or incorrect way to take this survey, we would like you to approach this as realistically as possible. After you're done taking the survey, I will ask you a few follow-up questions.

Does that all sound okay? **[WAIT FOR AGREEMENT]**

Thank you! The link to the website you need to go to was provided in the email you received, please follow that link. **[IF NECESSARY REMIND WHO THE SENDER OF THE EMAIL WAS]** Please let me know when you have the link open.

Thank you! You can start the survey. Please let me know when you complete the survey because I will have a few follow-up questions then.

[ALLOW THE RESPONDENT TO TAKE THE SURVEY AND FINISH]

Section 2: Follow-up Questions

[QUESTIONS TO ASK AFTER THE RESPONDENT FINISHED RESPONDING TO ALL SURVEY QUESTIONS AND INDICATES SO]

Q1. Did you have any problems or difficulties while taking the survey?

Q2. Did you think any questions were unclear? If so, which ones and why?

Q3. Did you think any answer options were unclear? If so, which ones and why?

Q4. Did any questions in the survey make you feel that you should answer one way or the other? If so, which ones and why?

Q5. What do you think might be the purpose for conducting this survey? What makes you think so?

Section 3: Closing

Q6. Is there anything else you would like to say about the survey?

Thank you so much for your time. Your participation is much appreciated and a representative from Advertiser Perceptions will reach out regarding your compensation for completing this survey. Have a good day.

APPENDIX F
HIGHER-SPEND ADVERTISER SURVEY

APPENDIX F.1
HIGHER-SPEND ADVERTISER SURVEY SCRIPT

Higher-Spend Advertiser Survey
Screener and Main Survey Programmer Instructions

LEGEND:

[PROGRAMMER NOTES IN BOLD CAPS AND BRACKETS]
Notes to respondent in italics

FORMAT: The survey consists of the following sections:

Introduction & Screening (questions labeled QS)
Main Survey Questions (questions labeled Q)
Follow-Up Questions (questions labeled QF)

Overview

[NO RESPONDENTS TO BE CONTACTED AT COMPANIES FROM THE LIST OF ENTITIES TO BE EXCLUDED]

[PANEL CONSISTS OF RESPONDENTS WHO ARE 18+, BASED IN THE U.S., AND WHOSE JOB FUNCTION RELATES TO MARKETING AND/OR ADVERTISING]

[TARGET 500 COMPLETES]

[DISABLE THE BROWSER'S "BACK" BUTTON AND DO NOT SHOW A "BACK" BUTTON WITHIN THE SURVEY]

[FORCE RESPONSES TO ANSWER ALL QUESTIONS UNLESS OTHERWISE SPECIFIED]

[DISPLAY ONE QUESTION PER PAGE UNLESS OTHERWISE SPECIFIED]

[NO SURVEY OR SECTION TITLES TO BE DISPLAYED TO RESPONDENTS]

[DIGITAL FINGERPRINTING SHOULD BE USED TO AVOID REPEAT PARTICIPATION]

[TEXT FOR TERMINATES: "THANK YOU FOR YOUR INTEREST IN OUR STUDY. YOU DO NOT QUALIFY FOR THIS STUDY. WE APPRECIATE YOUR TIME."]

Introduction and Screening

QS1. Please enter the code exactly as it appears in the box below, and then click "Continue" to continue.

[INSERT CAPTCHA; TERMINATE AFTER THREE INCORRECT ATTEMPTS]

QS2. Thank you for participating in our study. Your opinions are very important to us. If you don't know an answer to a question or if you don't have an opinion, please don't guess. Simply indicate this in your response by selecting the "Don't know / Unsure" option. There are no right or wrong answers.

Your responses will be kept anonymous and will be analyzed as part of a larger sample of responses. The results of this study will not be used to try to sell you anything.

If you wear glasses or corrective lenses when using a desktop computer, laptop computer, or tablet, please wear them throughout the survey.

Please do not use the "Back" button of your browser while taking the survey. When you are ready to get started, please select the "Continue" button.

QS3. What is your age? (*Please select only one option.*)

[FLIP ORDER PER RESPONDENT, AS IS AND REVERSE; KEEP "PREFER NOT TO ANSWER" LAST]

⦿ Under 18 **[TERMINATE]**
⦿ 18 - 34
⦿ 35 - 49
⦿ 50 - 64
⦿ 65 or above
⦿ Prefer not to answer **[TERMINATE]**

QS4. What is your gender? (*Please select only one option.*)

[RANDOMIZE; KEEP "OTHER" AND "PREFER NOT TO ANSWER" LAST]

⦿ Male
⦿ Female
⦿ Other: **[INSERT TEXT BOX]**
⦿ Prefer not to answer

QS5. In which state do you live? (*Please select only one option.*)

[INSERT DROP DOWN MENU OF ALL 50 STATES AND DC, PLUS "OTHER" AND "DON'T KNOW / UNSURE"]

[TERMINATE IF "OTHER" OR "DON'T KNOW / UNSURE" IS SELECTED]

QS6. Which of the following do you have any involvement in as part of your job responsibilities? *(Please select all that apply.)*

[RANDOMIZE; KEEP "OTHER" LAST]

- ❒ Hiring/HR
- ❒ IT/Tech
- ❒ Business intelligence/Data science
- ❒ Sales or account management
- ❒ Accounting/Finance
- ❒ Advertising or Marketing
- ❒ Website/Mobile App design/development
- ❒ Customer relationship management
- ❒ Data analysis/statistics
- ❒ Other (*specify):*

[TERMINATE IF "Advertising or Marketing" IS NOT SELECTED]

QS7. Which of the following best characterizes the type of company you work for? (*Please select only one option.*)

[RANDOMIZE; KEEP "OTHER" LAST]

- ⊙ **Advertiser/Marketer** – your company sells products or services and advertises/markets its products or services
- ⊙ **Creative Agency** – your company designs or produces marketing content and/or advises clients on their creative media/marketing strategies **[TERMINATE]**
- ⊙ **Media Agency** – your company advises clients on their media/marketing strategies and/or how to spend their advertising funds **[TERMINATE]**
- ⊙ **Full Service Agency** – your company handles both Creative and Media strategy and/or execution **[TERMINATE]**
- ⊙ **Other** (*please describe*)**: [INSERT TEXT BOX] [TERMINATE]**

QS8. Which of the following, if any, best characterizes the market sector/industry your company is in? (*Please select only one option.*)

[DO NOT RANDOMIZE]

- ⦿ Advertising or Marketing
- ⦿ Apparel/Fashion
- ⦿ Automotive
- ⦿ B2B/Services for Businesses
- ⦿ Consumer Electronics
- ⦿ Education
- ⦿ Financial Products/Services for Consumers (including Fintech)
- ⦿ Food and Beverage
- ⦿ Government
- ⦿ Health and Beauty Products
- ⦿ Home Products/Appliances
- ⦿ Health Care or Medical Services
- ⦿ Media and Entertainment
- ⦿ Non-Profit
- ⦿ Pharmaceuticals and Remedies (Rx or OTC)
- ⦿ Restaurants
- ⦿ Retail (including Ecommerce)
- ⦿ Telecommunications
- ⦿ Travel and Hospitality
- ⦿ Other (*Please describe*): **[INSERT TEXT BOX]**

QS9. Which of the following best characterizes your current job title/level? (*Please select only one option.*)

[RANDOMIZE; KEEP "OTHER" LAST]

- ⦿ C-Level (CEO, COO, CMO, etc.)
- ⦿ Vice President, SVP, EVP, President, etc.
- ⦿ Director
- ⦿ Supervisor/Department Head/Group Manager
- ⦿ Manager
- ⦿ Strategist
- ⦿ Associate
- ⦿ Analyst
- ⦿ Buyer
- ⦿ Planner
- ⦿ Other (*please describe*): **[INSERT TEXT BOX]**

QS10. Approximately how much did your company spend in the last 12 months on all advertising, including all digital types (e.g., display, video, audio, social) plus all nondigital types (e.g., TV types, print, OOH, etc.)? (*Please select only one option.*)

[FLIP ORDER PER RESPONDENT, AS IS AND REVERSE; KEEP "DON'T KNOW / UNSURE" LAST]

⦿ Less than $10,000 **[TERMINATE]**
⦿ $10,000 to less than $50,000 **[TERMINATE]**
⦿ $50,000 to less than $100,000 **[TERMINATE]**
⦿ $100,000 to less than $250,000 **[TERMINATE]**
⦿ $250,000 to less than $500,000 **[TERMINATE]**
⦿ $500,000 to less than $1 million
⦿ $1 million to less than $3 million
⦿ $3 million to less than $7 million
⦿ $7 million to less than $15 million
⦿ $15 million to less than $30 million
⦿ $30 million to less than $50 million
⦿ $50 million to less than $100 million
⦿ $100 million to less than $250 million
⦿ $250 million to less than $500 million
⦿ $500 million or more
⦿ Don't know / Unsure **[TERMINATE]**

QS11. Please think about your business unit/team's total advertising budget. In the past year, what percentage of your business unit/team's total advertising budget was used for **digital (online) advertising**, as opposed to **offline advertising**? Please give your best estimate. *(Please enter a number from 0 to 100 for each type of advertising, or select "Don't know / Unsure." Values must add up to 100%)*

[FOR ERRORS, DISPLAY THE FOLLOWING ERROR MESSAGE: "Please enter a whole number between 0 and 100 for each advertising type, or select "Don't know / Unsure." Values must add up to 100.**"][SHOW TOTAL AT BOTTOM]**

[RANDOMIZE ORDER; KEEP "DON'T KNOW / UNSURE" LAST]

Percentage of budget spent on **digital (online) advertising** last year:	☐
Percentage of budget spent on **offline advertising** last year:	☐
TOTAL	**[SHOW SUM OF NUMBERS ABOVE]**

⦿ Don't know / Unsure **[EXCLUSIVE]**

[TERMINATE IF DIGITAL (ONLINE) = 0]

QS12. Which of the following types of **digital advertising**, if any, has your business unit/team used in the past year? Please review the description of each advertising type **carefully**. *(Please select all that apply.)*

[RANDOMIZE ORDER; KEEP "OTHER" AND "DON'T KNOW / UNSURE" LAST]

	Advertising Type	**Description**
❒	Search	Digital ads placed on search engine result pages. Ads generally consist of a headline, description, and a link to the destination URL.
❒	Display	Digital ads made up of text, image, video, and/or other multimedia components that typically appear along the top or sides of a website, or sometimes in the middle of other content on a website. Examples of display ad formats include banner ads, animations, and interactive content. Display ads do not include ads placed on social media platforms.
❒	Email	Digital ads sent via email to current and potential customers.
❒	Digital Audio	Recorded advertisements that play between or during songs, podcasts, or other digital audio content.
❒	Social	Digital ads placed on social media platforms such as Facebook, Instagram, LinkedIn, Snapchat, and Twitter.
❒	App/In-App	Digital ads placed and displayed within mobile apps. Does not include ads placed on social media platforms.
❒	Digital Video	Includes video ads that appear before, during, or after digital content in a video player, such as YouTube.
❒	Connected TV	Includes digital advertising that appears on home screens of CTV devices and in-stream video ads that appear on CTVs from platforms like Hulu, Roku and YouTube. CTVs are TV sets connected to the internet through built-in internet capability or through another device such as a Blu-ray player, game console, set-top box (e.g., Apple TV, Google Chromecast, Roku), etc.
❒	eCommerce Platforms	Digital ads that appear on eCommerce platforms, such as Amazon.com or Instacart.
❒	Other *(specify and explain):* **[INSERT TEXT BOX]**	
⦿ Don't know / Unsure **[EXCLUSIVE]**		

[TERMINATE IF "DISPLAY" IS NOT SELECTED]

QS13. You indicated that your business unit/team has used **display advertising** in the past year. Display ad inventory can be purchased through programmatic transaction methods or through direct deals with publishers. Please review the below descriptions about these transaction methods.

Programmatic: Ads that are purchased programmatically are transacted and fulfilled using automation. In programmatic transactions, the price of each impression is typically determined in an auction conducted automatically before the impression is served.

Direct Deals: Ads that are purchased through a direct negotiation, or "direct deal," with the publisher. In direct deals, the price of the ad inventory is typically set through a one-to-one negotiation between the advertiser and the publisher rather than through an auction. "Direct deals" include programmatic direct deals, such as programmatic guaranteed deals and preferred deals.

Which of the following transaction methods has your business unit/team (or your ad agency) used to purchase **display ad inventory** in the past year? *(Please select all that apply.)*

[RANDOMIZE ORDER; KEEP "NONE OF THE ABOVE" AND "DON'T KNOW / UNSURE" LAST]

❒ Programmatic
❒ Direct Deals
⦿ None of the above **[EXCLUSIVE]**
⦿ Don't know / Unsure **[EXCLUSIVE]**

[TERMINATE IF "PROGRAMMATIC" IS NOT SELECTED]

QS14. **[IF "SOCIAL" IS SELECTED IN QS12]** You indicated that your business unit/team has used **social advertising** in the past year. Which of the following social media platforms, if any, has your business unit/team advertised on in the past year? (*Please select all that apply.*)

[RANDOMIZE ORDER; KEEP "OTHER," "NONE OF THE ABOVE", AND "DON'T KNOW / UNSURE" LAST]

- ❒ Facebook
- ❒ Instagram
- ❒ Pinterest
- ❒ Snapchat
- ❒ TikTok
- ❒ Twitter
- ❒ LinkedIn
- ❒ Reddit
- ❒ Tumblr
- ❒ FriendLinx
- ❒ Other social media platforms *(specify)*: **[INSERT TEXT BOX]**
- ⦿ None of the above **[EXCLUSIVE]**
- ⦿ Don't know / Unsure **[EXCLUSIVE]**

QS15. In which of the following ways have you personally been involved in your company's **digital display** advertising efforts in the **last 12 months**? (*Please select all that apply.*)

[RANDOMIZE; KEEP "NONE OF THE ABOVE" AND "DON'T KNOW / UNSURE" LAST]

- ❒ I determine overall strategies and/or budgets for digital display
- ❒ I determine which buying tools and/or demand-side platforms (DSPs) to use for digital display
- ❒ I regularly use self-serve ad platforms to manage digital display campaigns
- ❒ I oversee a team/individuals that use(s) self-serve ad platforms to manage digital display campaigns
- ❒ I regularly set up audience/target parameters for programmatic digital display buying
- ❒ I oversee a team/individuals that set(s) up audience/target parameters for programmatic digital display buying
- ❒ I measure results of digital display campaigns
- ❒ I oversee a team/individuals that measure(s) results of digital display campaigns
- ⦿ None of the above **[EXCLUSIVE] [TERMINATE]**
- ⦿ Don't know / Unsure **[EXCLUSIVE] [TERMINATE]**

[TERMINATE IF NONE OF "I determine overall strategies and/or budgets for digital display**", "**I determine which buying tools and/or demand-side platforms (DSPs) to use for digital display**", "**I regularly use self-serve ad platforms to manage digital display campaigns**", "**I oversee a team/individuals that use(s) self-serve ad platforms to manage digital display campaigns**" ARE SELECTED]**

QS16. This question is testing whether or not you're paying attention while taking this survey. Please select "Somewhat likely" below. (*Please select only one option.*)

[FLIP ORDER PER RESPONDENT, AS IS AND REVERSE; KEEP "DON'T KNOW / UNSURE" LAST]

- ⦿ Not at all likely **[TERMINATE]**
- ⦿ Not likely **[TERMINATE]**
- ⦿ Neither unlikely nor likely **[TERMINATE]**
- ⦿ Somewhat likely
- ⦿ Very likely **[TERMINATE]**
- ⦿ Don't know / Unsure **[TERMINATE]**

Main Questionnaire

Q1. You have been selected to answer questions about advertising practices used by your business unit, or the team you work on. For each question, if you don't know or are unsure, please don't guess. Simply indicate this in your response by selecting the "Don't know / Unsure" option. There are no right or wrong answers.

Also, you should complete this survey without stopping in the middle. Please make sure not to consult anyone; use your browser's "Back" button; or open another browser while working on this survey.

Use of Ad Agencies

Q2. Do you or do you not use an ad agency for digital advertising? *(Please select one option.)*

[FLIP ORDER PER RESPONDENT, AS IS AND REVERSE; KEEP "DON'T KNOW / UNSURE" LAST]

- ⦿ Yes, I use an ad agency for digital advertising
- ⦿ No, I do **not** use an ad agency for digital advertising
- ⦿ Don't know / Unsure

Q3. **[IF RESPONDENT SELECTED "YES" IN Q2]** For which, if any, of the following do you use an ad agency? *(Please select all that apply.)*

[RANDOMIZE ORDER; KEEP "OTHER," "NONE OF THE ABOVE," AND "DON'T KNOW / UNSURE" LAST]

- ❐ Content and/or creatives
- ❐ Consulting services
- ❐ Media/marketing strategies
- ❐ Allocating advertising funds across advertising types
- ❐ Budgeting decisions
- ❐ Customer research
- ❐ Implementation of advertising (e.g., placing bids, interacting with DSPs)
- ❐ Tracking advertising performance
- ❐ Inventory access
- ❐ Running advertising tests/experiments
- ❐ Other *(specify)*: **[INSERT TEXT BOX]**
- ⦿ None of the above **[EXCLUSIVE]**
- ⦿ Don't know / Unsure **[EXCLUSIVE]**

Budget Allocation and Substitution

Q4. The following questions pertain to **digital advertising**.

Previously, you mentioned that your business unit/team has used the following types of **digital advertising** in the past year. What is your best estimate of the share of your business unit/team's **digital advertising** budget that was used for each of these types of advertising in the past year? Specifically, please allocate 100% across the different types of digital advertising shown below based on the share of your total digital advertising budget spent on each type. The total should add up to 100%.

To review the advertising type descriptions, hover your mouse over each digital advertising type.

(Please enter a number from 0 to 100 in each cell, or select "Don't know / Unsure." Please make sure that numbers add up to 100.)

[SHOW ALL ANSWER OPTIONS SELECTED IN QS12 AND QS13 WITH TEXT BOX REQUIRING WHOLE NUMBER BETWEEN 0 AND 100. RANDOMIZE ORDER; KEEP "OTHER" AND "DON'T KNOW / UNSURE" LAST. SHOW RUNNING TOTAL AT THE BOTTOM OF THE PAGE WITH THE SUM OF THE NUMBERS ENTERED]

[DISPLAY DESCRIPTIONS FROM QS12 AND QS13 WHEN RESPONDENT HOVERS OVER TYPE OF ADVERTISING]

[THE SUM OF ALL NUMBERS MUST EQUAL 100. IF RESPONDENT CLICKS "NEXT" AND THE SUM OF THE NUMBERS IS NOT EQUAL TO 100, SHOW THE FOLLOWING ERROR MESSAGE: "Sorry, your answers do not add up to 100. Please try again.**"]**

[FOR ALL OTHER ERRORS, DISPLAY THE FOLLOWING ERROR MESSAGE: "Please specify a whole number in each cell, and do not leave any cell blank. Please enter 0 if you do not spend any portion of your advertising budget on a type of advertising.**"]**

Search:	
Programmatic Display:	
Direct Deals Display:	
Email:	
Digital Audio:	
Social:	
App/In-app:	
Digital Video:	
Connected TV:	

eCommerce Platforms:	☐
Other	☐
TOTAL	**[SHOW SUM OF NUMBERS ABOVE]**

- ⦿ Don’t know / Unsure **[EXCLUSIVE]**

Q5. Please read carefully. Now suppose that, based on your analysis, the cost of **programmatic display advertising** has **recently increased by a small but significant amount, and will remain elevated for the foreseeable future**. Assume further that, based on similar analyses for other digital advertising types, the **costs of other digital advertising types** have **not** changed and are not expected to change.

So if the cost of programmatic display advertising increases (while the cost of other advertising types remains the same), will you or won’t you divert some of your advertising spending for the coming year to other types of digital advertising?

[FLIP ORDER PER RESPONDENT, AS IS AND REVERSE; KEEP “DON’T KNOW / UNSURE” LAST]

- ⦿ Yes, I will divert some of my advertising spending for the coming year to other types of digital advertising.
- ⦿ No, I will **not** divert any of my advertising spending for the coming year to other types of digital advertising. **[SKIP TO Q8]**
- ⦿ Don’t know / Unsure **[SKIP TO Q8]**

Q6. To which other types of digital advertising below, if any, would you divert your advertising spending for the coming year as a result of the **increase in the cost of programmatic display advertising**?

To review the advertising type descriptions, hover your mouse over each digital advertising type.

(Please select all that apply.)

[DISPLAY DESCRIPTIONS FROM QS12 AND QS13 WHEN RESPONDENT HOVERS OVER TYPE OF ADVERTISING. RANDOMIZE ORDER; KEEP “OTHER,” “NONE OF THE ABOVE,” AND “DON’T KNOW / UNSURE” LAST.]

- ☐ Search
- ☐ Direct Deals Display
- ☐ Email
- ☐ Digital Audio
- ☐ Social
- ☐ App/In-App
- ☐ Digital Video

❒ Connected TV
❒ eCommerce Platforms
❒ Other
⦿ None of the above **[EXCLUSIVE] [SKIP TO Q8]**
⦿ Don't know / Unsure **[EXCLUSIVE] [SKIP TO Q8]**

Q7. In your previous answer, you indicated that the increase in the cost of programmatic display advertising will lead you to divert some of your advertising spending to the types of digital advertising listed below.

Please use the sliders below to indicate, on a scale of **0** to **10**, the extent to which you would divert (that is, increase) advertising spending for the coming year to **each type of digital advertising** that you just indicated.

For each digital advertising type below, please select **0** if you expect to keep spending on that type of digital advertising for the coming year and **10** if you expect to substantially increase spending on that type of digital advertising.

To review the advertising type descriptions, hover your mouse over each digital advertising type.

[SHOW ANSWER OPTIONS SELECTED IN Q6. MATCH ORDER OF RESPONSES TO Q6. FOR EACH ADVERTISING TYPE, SHOW SLIDER FROM 0 TO 10, LABEL 0 "KEEP THE SAME" AND 10 "SUBSTANTIALLY INCREASE." INCLUDE OPTION FOR "DON'T KNOW / UNSURE".]

[DISPLAY DESCRIPTIONS FROM QS12 AND QS13 WHEN RESPONDENT HOVERS OVER TYPE OF ADVERTISING]

Search	**[INSERT SLIDER]**	⦿ Don't know / Unsure
Direct Deals Display	**[INSERT SLIDER]**	⦿ Don't know / Unsure
Email	**[INSERT SLIDER]**	⦿ Don't know / Unsure
Digital Audio	**[INSERT SLIDER]**	⦿ Don't know / Unsure
Social	**[INSERT SLIDER]**	⦿ Don't know / Unsure
App/In-app	**[INSERT SLIDER]**	⦿ Don't know / Unsure
Digital Video	**[INSERT SLIDER]**	⦿ Don't know / Unsure
Connected TV	**[INSERT SLIDER]**	⦿ Don't know / Unsure
eCommerce Platforms	**[INSERT SLIDER]**	⦿ Don't know / Unsure
Other	**[INSERT SLIDER]**	⦿ Don't know / Unsure

Use of Ad Buying Tools for Programmatic Display (Multihoming)

Q8. An ad buying tool is a programmatic advertising platform that allows advertisers and media buying agencies to bid automatically on display ad inventory from a wide range of publishers. Some ad buying tools can also be used to buy video and search ad inventory. Ad buying tools include demand side platforms, or "DSPs."

Which of the following ad buying tools, if any, have you and/or your business unit/team used during the **past year** for **programmatic display advertising**? *(Please select all that apply.)*

[RANDOMIZE ORDER; KEEP "OTHER" AND "DON'T KNOW / UNSURE" LAST]

- ❒ Google Ads
- ❒ Google Display and Video 360 (DV360)
- ❒ illumin (formerly AcuityAds)
- ❒ Adelphic
- ❒ Adform
- ❒ Adobe Advertising Cloud
- ❒ Amazon DSP
- ❒ Amobee
- ❒ Basis by Centro
- ❒ Beeswax
- ❒ Criteo
- ❒ MediaMath DSP
- ❒ Outbrain
- ❒ Quantcast
- ❒ Simpli.fi
- ❒ StackAdapt
- ❒ Taboola
- ❒ The Trade Desk DSP
- ❒ Yahoo DSP (formerly Verizon Media DSP)
- ❒ Xandr Invest
- ❒ Zeta Global
- ❒ Quorexx
- ❒ Ad Step Technologies
- ❒ Other (*please specify*): **[TEXT BOX]**
- ⦿ Don't know / Unsure **[EXCLUSIVE] [SKIP TO Q17]**

[ADD FOLLOWING TEXT AS HOVER OVER FOR ALL INSTANCES OF "AD BUYING TOOL" IN FOLLOWING QUESTIONS: An ad buying tool is a programmatic advertising platform that allows advertisers and media buying agencies to bid automatically on display ad inventory from a wide range of publishers. Some ad buying tools can also be used to buy video and search ad inventory Ad buying tools include demand side platforms, or "DSPs.".**]**

Q9. **[IF MORE THAN ONE AD BUYING TOOL IS SELECTED IN Q8]** Why did you and/or your business unit/team use more than one ad buying tool for **programmatic display advertising** in the past year? *(Please type in your response, or select "Don't know / Unsure".)*

[INSERT TEXT BOX]
[REQUIRE AT LEAST 4 CHARACTERS; IF ENTRY IS LESS THAN 4 CHARACTERS, SHOW ERROR "*Please be thorough in your response."***]**

- ⦿ Don't know / Unsure **[EXCLUSIVE]**

Q10. Do you and/or your business unit/team expect to use the same number, more, or fewer ad buying tools for **programmatic display advertising** next year? *(Please select only one option.)*

[RANDOMIZE ORDER; KEEP "DON'T KNOW / UNSURE" LAST]

- ⦿ I expect to use **more** ad buying tools for programmatic display advertising next year.
- ⦿ I expect to use **fewer** ad buying tools for programmatic display advertising next year.
- ⦿ I expect to use the **same number** of ad buying tools for programmatic display advertising next year.
- ⦿ Don't know / Unsure

Q11. **[IF MORE OR FEWER IS SELECTED IN Q10]** You indicated that, compared to the past year, you expect to use **[PIPE IN BASED ON ANSWER IN Q10:** "**more**" or "**fewer**"**]** ad buying tools for programmatic display advertising next year. Why do you and/or your business unit/team expect to use **[PIPE IN BASED ON ANSWER IN Q10:** "**more**" or "**fewer**"**]** ad buying tools for programmatic display advertising next year? *(Please type in your response, or select "Don't know / Unsure".)*

[INSERT TEXT BOX]
[REQUIRE AT LEAST 4 CHARACTERS; IF ENTRY IS LESS THAN 4 CHARACTERS, SHOW ERROR "*Please be thorough in your response."***]**

- ⦿ Don't know / Unsure **[EXCLUSIVE]**

Q12. Which of the following factors, if any, do you and/or your business unit/team consider when deciding to use a particular ad buying tool for **programmatic display advertising**? *(Please select all that apply.)*

[RANDOMIZE ORDER; KEEP "OTHER" AND "DON'T KNOW / UNSURE" LAST]

- ❒ Ad placement effectiveness
- ❒ Audience scale / Reach
- ❒ Ease of use / User interface
- ❒ Targeting criteria and capabilities
- ❒ Reporting features
- ❒ Forecasting tools
- ❒ Budget management tools
- ❒ API and integrations
- ❒ Troubleshooting capabilities
- ❒ Media optimization of placements during a campaign
- ❒ Brand safety / fraud protection
- ❒ Identity management
- ❒ Support
- ❒ Cost
- ❒ Other *(please specify):* **[TEXT BOX]**
- ⦿ Don't know / Unsure **[EXCLUSIVE]**

Q13. Have you and/or your business unit/team stopped using any ad buying tool(s) for **programmatic display advertising** in the **past year**? *(Please select only one option.)*

[RANDOMIZE ORDER; KEEP "DON'T KNOW / UNSURE" LAST]

- ⦿ Yes, I and/or my business unit/team stopped using at least one ad buying tool in the past year.
- ⦿ No, I and/or my business unit/team have **not** stopped using any ad buying tools in the past year. **[SKIP TO Q15]**
- ⦿ Don't know / Unsure **[SKIP TO Q15]**

Q14. **[IF YES IN Q13]** You indicated that you and/or your business unit/team stopped using at least one ad buying tool in the **past year** for **programmatic display advertising**. What factors led you and/or your business unit/team to stop using one or more ad buying tools for **programmatic display advertising**? *(Please type your response in the text box below, or select "Don't know / Unsure".)*

[INSERT TEXT BOX]
[REQUIRE AT LEAST 4 CHARACTERS; IF ENTRY IS LESS THAN 4 CHARACTERS, SHOW ERROR "*Please be thorough in your response."***]**

- ⦿ Don't know / Unsure **[EXCLUSIVE]**

Q15. Have you and/or your business unit/team started using any ad buying tool(s) in the **past year** for **programmatic display advertising**? *(Please select only one option.)* **[RANDOMIZE ORDER; KEEP "DON'T KNOW / UNSURE" LAST]**

- ⦿ Yes, I and/or my business unit/team started using at least one ad buying tool in the past year.
- ⦿ No, I and/or my business unit/team have **not** started using any ad buying tools in the past year.
- ⦿ Don't know / Unsure

Q16. **[IF YES IN Q15]** You indicated that you and/or your business unit/team started using at least one ad buying tool in the **past year** for **programmatic display advertising**. What factors led you and/or your business unit/team to start using one or more ad buying tools for **programmatic display advertising**? *(Please type your response in the text box below, or select "Don't know / Unsure".)*

[INSERT TEXT BOX]
[REQUIRE AT LEAST 4 CHARACTERS; IF ENTRY IS LESS THAN 4 CHARACTERS, SHOW ERROR "*Please be thorough in your response."***]**

- ⦿ Don't know / Unsure **[EXCLUSIVE]**

Measuring Performance

Q17. **[ONLY INCLUDE ADVERTISING TYPES SELECTED IN QS12 AND QS13]** Which of the following metrics, if any, are you and/or your business unit/team using to assess the performance of **programmatic display ads**, **direct deals display ads**, **social media ads**, and/or **digital video ads**?

To review the advertising type descriptions, hover your mouse over each digital advertising type. *(Please select all that apply in each column.)*

[DISPLAY DESCRIPTIONS FROM QS12 WHEN RESPONDENT HOVERS OVER TYPE OF ADVERTISING]

[RANDOMIZE ORDER OF ROWS; KEEP "OTHER," "NONE OF THE ABOVE," AND "DON'T KNOW / UNSURE" LAST. RANDOMIZE ORDER OF COLUMNS]

Metric	Programmatic display ads	Direct deals display ads	Social media ads	Digital video ads
Impressions	❒	❒	❒	❒
Clicks	❒	❒	❒	❒
Conversions	❒	❒	❒	❒
Cost per impression (CPM)	❒	❒	❒	❒
Cost per click (CPC)	❒	❒	❒	❒
Cost per action (CPA)	❒	❒	❒	❒
Return on Ad Spend (ROAS)	❒	❒	❒	❒
Return on Investment (ROI)	❒	❒	❒	❒
Click through rate (CTR)	❒	❒	❒	❒
Other (*please specify*): **[TEXT BOX]**	❒	❒	❒	❒
None of the above **[EXCLUSIVE]**	⊙	⊙	⊙	⊙
Don't know / Unsure **[EXCLUSIVE]**	⊙	⊙	⊙	⊙

Q18. **[ONLY IF MORE THAN ONE METRIC FOR PROGRAMMATIC DISPLAY ADS ARE SELECTED IN Q17]** You indicated that you and/or your business unit/team use the following metrics to assess the performance of **programmatic display ads**. Please rank these metrics in terms of **how important they are to accurately assessing the performance of programmatic display ads**, with 1 being the most important and **[NUMBER OF MEASURES SELECTED IN Q17]** being the least important. *(Please rank the following metrics, or select "Don't know / Unsure".)*

[HAVE RESPONDENTS ASSIGN A RANK FROM 1 TO THE NUMBER OF RESPONSES SELECTED IN Q17 FOR EACH PERFORMANCE METRIC]

⊙ Don't know / Unsure **[EXCLUSIVE]**

Q19. How often, if at all, do you and/or your business unit/team measure or assess the performance of your **programmatic display advertising**? *(Please select only one option.)*

If you are using an ad agency and they are responsible for measuring or assessing performance of your programmatic display advertising, please indicate how often you receive information about the performance of your programmatic display advertising from the agency.

[RANDOMIZE ORDER AS IS AND REVERSE; KEEP "DON'T KNOW / UNSURE" LAST]

⦿ Daily
⦿ Weekly
⦿ Monthly
⦿ Quarterly
⦿ Annually
⦿ Don't know / Unsure

Q20. In the past year, have you and/or your business unit/team run any experimental or test & learn initiatives on your **programmatic display ads**? *(Please select only one option.)* **[RANDOMIZE ORDER AS IS AND REVERSE; KEEP "DON'T KNOW / UNSURE" LAST]**

⦿ Yes
⦿ No **[SKIP TO QF1]**
⦿ Don't know / Unsure **[SKIP TO QF1]**

Q21. Which of the following types of experiments or test & learn initiatives, if any, have you and/or your business unit/team run in the past year on your **programmatic display ads**?

I and/or my business unit/team have run experiments and/or test & learn initiatives testing… *(Please select all that apply.)*

[RANDOMIZE ORDER; KEEP "OTHER" AND "DON'T KNOW / UNSURE" LAST]

❒ Creatives
❒ Bid strategies
❒ Audiences
❒ Publishers
❒ Ad buying tool performance
❒ ROI/ROAS
❒ Other (*please specify*): **[TEXT BOX]**
⦿ Don't know / Unsure **[EXCLUSIVE]**

Follow Up Question

QF1. This survey is being conducted by consultants that have been retained on behalf of Google in connection with pending antitrust lawsuits in which the plaintiffs allege that Google engaged in anticompetitive conduct related to digital advertising.

If you are willing to participate in this survey, please click "Include my responses" below. As a reminder, your responses will be kept anonymous and will be analyzed as part of a larger sample of responses.

If you do not want to participate in this survey, please click "Exclude my responses" below.

[RANDOMIZE ORDER]

- ⦿ Include my responses
- ⦿ Exclude my responses

APPENDIX F.2
HIGHER-SPEND ADVERTISER SURVEY SCREENSHOTS

INTRODUCTION AND SCREENING

0%

AD PROS™
ADVERTISER PERCEPTIONS

Please enter the code exactly as it appears in the box below, and then click “Continue” to continue.

ONEYRK

Continue »

3%

AD PROS™
ADVERTISER PERCEPTIONS

Thank you for participating in our study. Your opinions are very important to us. If you don't know an answer to a question or if you don't have an opinion, please don't guess. Simply indicate this in your response by selecting the "Don't know/Unsure" option. There are no right or wrong answers.

Your responses will be kept anonymous and will be analyzed as part of a larger sample of responses. The results of this study will not be used to try to sell you anything.

If you wear glasses or corrective lenses when using a desktop computer, laptop computer, or tablet, please wear them throughout the survey.

Please do not use the "Back" button of your browser while taking the survey. When you are ready to get started, please select the "Continue" button.

Continue »

6%

AD PROS™
ADVERTISER PERCEPTIONS

What is your age?

(Please select only one option.)

- 65 or above
- 50 – 64
- 35 – 49
- 18 – 34
- Under 18
- Prefer not to answer

Continue »

9%

AD PROS™
ADVERTISER PERCEPTIONS

What is your gender?
(Please select only one option.)

- Female
- Male
- Other:
- Prefer not to answer

Continue »

13%

AD PROS™
ADVERTISER PERCEPTIONS

In which state do you live?

(Please select only one option.)

Select one...

Continue »

16%

AD PROS™
ADVERTISER PERCEPTIONS

Which of the following do you have any involvement in as part of your job responsibilities?
(Please select all that apply.)

- [ ] Customer relationship management
- [ ] Hiring/HR
- [ ] Data analysis/statistics
- [ ] Business intelligence/Data science
- [ ] Website/Mobile App design/development
- [ ] Advertising or Marketing
- [ ] Accounting/Finance
- [ ] Sales or account management
- [ ] IT/Tech
- [ ] Other *(specify)*: ______

Continue »

19%

AD PROS™
ADVERTISER PERCEPTIONS

Which of the following best characterizes the type of company you work for?

(Please select only one option.)

- **Full Service Agency** – your company handles both Creative and Media strategy and/or execution
- **Creative Agency** – your company designs or produces marketing content and/or advises clients on their creative media/marketing strategies
- **Media Agency** – your company advises clients on their media/marketing strategies and/or how to spend their advertising funds
- **Advertiser/Marketer** – your company sells products or services and advertises/markets its products or services
- **Other** *(please describe):*

Continue »

22%

AD PROS™
ADVERTISER PERCEPTIONS

Which of the following, if any, best characterizes the market sector/industry your company is in?
(Please select only one option.)

- Advertising or Marketing
- Apparel/Fashion
- Automotive
- B2B/Services for Businesses
- Consumer Electronics
- Education
- Financial Products/Services for Consumers (including Fintech)
- Food and Beverage
- Government
- Health and Beauty Products
- Home Products/Appliances
- Health Care or Medical Services
- Media and Entertainment
- Non-Profit
- Pharmaceuticals and Remedies (Rx or OTC)
- Restaurants
- Retail (including Ecommerce)
- Telecommunications
- Travel and Hospitality
- Other *(Please describe)*:

Continue »

26%

AD PROS™
ADVERTISER PERCEPTIONS

Which of the following best characterizes your current job title/level?
(Please select only one option.)

- Director
- Planner
- Manager
- Associate
- Strategist
- Buyer
- C-Level (CEO, COO, CMO, etc.)
- Supervisor/Department Head/Group Manager
- Vice President, SVP, EVP, President, etc.
- Analyst
- Other *(please describe)*:

Continue »

29%

AD PROS™
ADVERTISER PERCEPTIONS

Approximately how much did your company spend in the last 12 months on all advertising, including all digital types (e.g., display, video, audio, social) plus all non-digital types (e.g., TV types, print, OOH, etc.)?
(Please select only one option.)

- $500 million or more
- $250 million to less than $500 million
- $100 million to less than $250 million
- $50 million to less than $100 million
- $30 million to less than $50 million
- $15 million to less than $30 million
- $7 million to less than $15 million
- $3 million to less than $7 million
- $1 million to less than $3 million
- $500,000 to less than $1 million
- $250,000 to less than $500,000
- $100,000 to less than $250,000
- $50,000 to less than $100,000
- $10,000 to less than $50,000
- Less than $10,000
- Don't know/Unsure

Continue »

32%

AD PROS™
ADVERTISER PERCEPTIONS

Please think about your business unit/team's total advertising budget. In the past year, what percentage of your business unit/team's total advertising budget was used for **digital (online) advertising**, as opposed to **offline advertising**? Please give your best estimate.

(Please enter a number from 0 to 100 for each type of advertising or select "Don't know/Unsure." Values must add up to 100%)

Percentage of budget spent on **offline advertising** last year:	%
Percentage of budget spent on **digital (online) advertising** last year:	%
Don't know/Unsure	
	Total: 0 %

Continue »

35%

AD PROS™
ADVERTISER PERCEPTIONS

Which of the following types of **digital advertising**, if any, has your business unit/team used in the past year? Please review the description of each advertising type **carefully**.
(Please select all that apply.)

- [ ] **Social** (Digital ads placed on social media platforms such as Facebook, Instagram, LinkedIn, Snapchat, and Twitter.)
- [ ] **Search** (Digital ads placed on search engine result pages. Ads generally consist of a headline, description, and a link to the destination URL.)
- [ ] **Digital Audio** (Recorded advertisements that play between or during songs, podcasts, or other digital audio content.)
- [ ] **Email** (Digital ads sent via email to current and potential customers.)
- [ ] **Display** (Digital ads made up of text, image, video, and/or other multimedia components that typically appear along the top or sides of a website, or sometimes in the middle of other content on a website. Examples of display ad formats include banner ads, animations, and interactive content. Display ads do not include ads placed on social media platforms.)
- [ ] **App/In-App** (Digital ads placed and displayed within mobile apps. Does not include ads placed on social media platforms.)
- [ ] **eCommerce Platforms** (Digital ads that appear on eCommerce platforms, such as Amazon.com or Instacart.)
- [ ] **Connected TV** (Includes digital advertising that appears on home screens of CTV devices and in-stream video ads that appear on CTVs from platforms like Hulu, Roku and YouTube. CTVs are TV sets connected to the internet through built-in internet capability or through another device such as a Blu-ray player, game console, set-top box (e.g., Apple TV, Google Chromecast, Roku), etc.)
- [ ] **Digital Video** (Includes video ads that appear before, during, or after digital content in a video player, such as YouTube.)
- [ ] Other *(specify and explain)*: ____________
- [ ] Don't know/Unsure

Continue »

39%

AD PROS™
ADVERTISER PERCEPTIONS

You indicated that your business unit/team has used **display advertising** in the past year. Display ad inventory can be purchased through programmatic transaction methods or through direct deals with publishers. Please review the below descriptions about these transaction methods.

Programmatic: Ads that are purchased programmatically are transacted and fulfilled using automation. In programmatic transactions, the price of each impression is typically determined in an auction conducted automatically before the impression is served.

Direct Deals: Ads that are purchased through a direct negotiation, or "direct deal," with the publisher. In direct deals, the price of the ad inventory is typically set through a one-to-one negotiation between the advertiser and the publisher rather than through an auction. "Direct deals" include programmatic direct deals, such as programmatic guaranteed deals and preferred deals.

Which of the following transaction methods has your business unit/team (or your ad agency) used to purchase **display ad inventory** in the past year?
(Please select all that apply.)

- ☐ Direct Deals
- ☐ Programmatic
- ☐ None of the above
- ☐ Don't know/Unsure

Continue »

42%

AD PROS™
ADVERTISER PERCEPTIONS

You indicated that your business unit/team has used **social advertising** in the past year. Which of the following social media platforms, if any, has your business unit/team advertised on in the past year?
(Please select all that apply.)

- [ ] Twitter
- [ ] Reddit
- [ ] Pinterest
- [ ] Snapchat
- [ ] Tumblr
- [ ] Facebook
- [ ] Instagram
- [ ] TikTok
- [ ] LinkedIn
- [ ] FriendLinx
- [ ] Other social media platforms *(specify)*: ______
- [ ] None of the above
- [ ] Don't know/Unsure

Continue »

45%

AD PROS™
ADVERTISER PERCEPTIONS

In which of the following ways have you personally been involved in your company's **digital display** advertising efforts in the **last 12 months**?
(Select all that apply.)

- [ ] I oversee a team/individuals that measure(s) results of digital display campaigns.
- [ ] I determine overall strategies and/or budgets for digital display.
- [ ] I measure results of digital display campaigns.
- [ ] I oversee a team/individuals that set(s) up audience/target parameters for programmatic digital display buying.
- [ ] I regularly set up audience/target parameters for programmatic digital display buying.
- [ ] I regularly use self-serve ad platforms to manage digital display campaigns.
- [ ] I oversee a team/individuals that use(s) self-serve ad platforms to manage digital display campaigns.
- [ ] I determine which buying tools and/or demand-side platforms (DSPs) to use for digital display.
- [ ] None of the above
- [ ] Don't know/Unsure

Continue »

46%

AD PROS™
ADVERTISER PERCEPTIONS

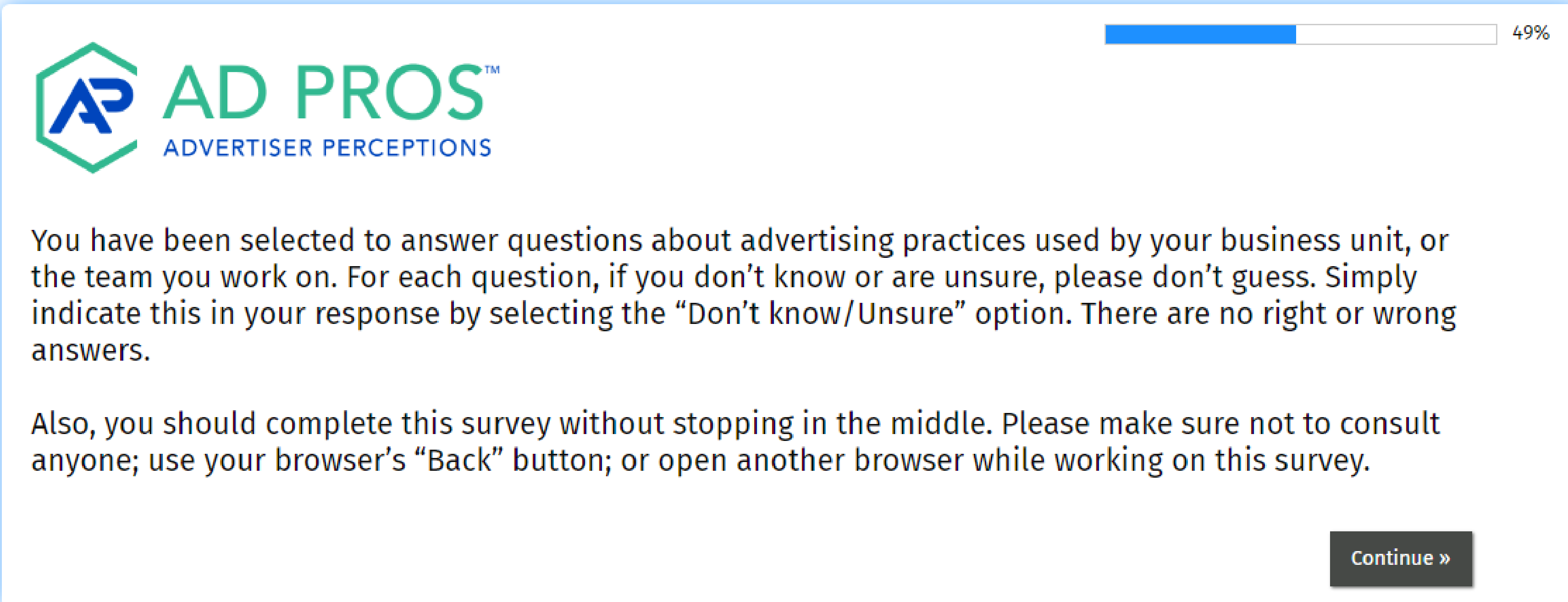
This question is testing whether or not you're paying attention while taking this survey. Please select "Somewhat likely" below.

(Please select only one option.)

- ○ Very likely
- ○ Somewhat likely
- ○ Neither unlikely nor likely
- ○ Not likely
- ○ Not at all likely
- ○ Don't know/Unsure

Continue »

MAIN QUESTIONNAIRE



53%

AD PROS™
ADVERTISER PERCEPTIONS

Do you or do you not use an ad agency for digital advertising?
(Please select one option.)

- No, I do **not** use an ad agency for digital advertising
- Yes, I use an ad agency for digital advertising
- Don't know/Unsure

Continue »

56%

AD PROS™
ADVERTISER PERCEPTIONS

For which, if any, of the following do you use an ad agency?
(Please select all that apply.)

- [ ] Running advertising tests/experiments
- [ ] Allocating advertising funds across advertising types
- [ ] Content and/or creatives
- [ ] Implementation of advertising (e.g., placing bids, interacting with DSPs)
- [ ] Customer research
- [ ] Tracking advertising performance
- [ ] Budgeting decisions
- [ ] Inventory access
- [ ] Consulting services
- [ ] Media/marketing strategies
- [ ] Other *(specify)*:
- [ ] None of the above
- [ ] Don't know/Unsure

Continue »

57%

AD PROS™
ADVERTISER PERCEPTIONS

The following questions pertain to **digital advertising**.

Previously, you mentioned that your business unit/team has used the following types of **digital advertising** in the past year. What is your best estimate of the share of your business unit/team's **digital advertising** budget that was used for each of these types of advertising in the past year? Specifically, please allocate 100% across the different types of digital advertising shown below based on the share of your total digital advertising budget spent on each type. The total should add up to 100%.

To review the advertising type descriptions, hover your mouse over each digital advertising type.

(Please enter a number from 0 to 100 in each cell, or select "Don't know/Unsure." Please make sure that numbers add up to 100.)

Email	%
App/In-App	%
eCommerce Platforms	%
Social	%
Digital Audio	%
Programmatic Display	%
Direct Deals Display	%
Digital Video	%
Connected TV	%
Search	%
Don't know/Unsure	
	Total: 0 %

Continue »

60%

AD PROS™ ADVERTISER PERCEPTIONS

Please read carefully. Now suppose that, based on your analysis, the cost of **programmatic display advertising** has **recently increased by a small but significant amount, and will remain elevated for the foreseeable future**. Assume further that, based on similar analyses for other digital advertising types, the **costs of other digital advertising types** have **not** changed and are not expected to change.

So if the cost of programmatic display advertising increases (while the cost of other advertising types remains the same), will you or won't you divert some of your advertising spending for the coming year to other types of digital advertising?

- No, I will **not** divert any of my advertising spending for the coming year to other types of digital advertising.
- Yes, I will divert some of my advertising spending for the coming year to other types of digital advertising.
- Don't know/Unsure

Continue »

64%

AD PROS™
ADVERTISER PERCEPTIONS

To which other types of digital advertising below, if any, would you divert your advertising spending for the coming year as a result of the **increase in the cost of programmatic display advertising**?

To review the advertising type descriptions, hover your mouse over each digital advertising type.
(Please select all that apply.)

- [ ] Email
- [ ] App/In-App
- [ ] eCommerce Platforms
- [ ] Social
- [ ] Digital Audio
- [ ] Search
- [ ] Direct Deals Display
- [ ] Digital Video
- [ ] Connected TV
- [ ] Other
- [ ] None of the above
- [ ] Don't know/Unsure

Continue »

64%

AD PROS™
ADVERTISER PERCEPTIONS

In your previous answer, you indicated that the increase in the cost of programmatic display advertising will lead you to divert some of your advertising spending to the types of digital advertising listed below.

Please use the sliders below to indicate, on a scale of **0** to **10**, the extent to which you would divert (that is, increase) advertising spending for the coming year to **each type of digital advertising** that you just indicated.

For each digital advertising type below, please select **0** if you expect to keep spending on that type of digital advertising for the coming year and **10** if you expect to substantially increase spending on that type of digital advertising.

To review the advertising type descriptions, hover your mouse over each digital advertising type.

Email

0 Keep the same | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 Substantially increase

☐ *Don't know/Unsure*

App/In-App

0 Keep the same | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 Substantially increase

☐ *Don't know/Unsure*

eCommerce Platforms

0 Keep the same | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 Substantially increase

☐ *Don't know/Unsure*

Social

0 Keep the same | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 Substantially increase

☐ *Don't know/Unsure*

Digital Audio

0 Keep the same | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 Substantially increase

☐ *Don't know/Unsure*

66%

AD PROS™
ADVERTISER PERCEPTIONS

An ad buying tool is a programmatic advertising platform that allows advertisers and media buying agencies to bid automatically on display ad inventory from a wide range of publishers. Some ad buying tools can also be used to buy video and search ad inventory. Ad buying tools include demand side platforms, or “DSPs.”

Which of the following ad buying tools, if any, have you and/or your business unit/team used during the **past year** for **programmatic display advertising**?
(Please select all that apply.)

Xandr Invest	☐	Adelphic	☐
Simpli.fi	☐	MediaMath DSP	☐
Yahoo DSP (formerly Verizon Media DSP)	☐	Ad Step Technologies	☐
Adobe Advertising Cloud	☐	Adform	☐
Outbrain	☐	Basis by Centro	☐
Zeta Global	☐	StackAdapt	☐
Criteo	☐	Beeswax	☐
Google Ads	☐	Amazon DSP	☐
Google Display and Video 360 (DV360)	☐	Taboola	☐
Amobee	☐	Quorexx	☐
illumin (formerly AcuityAds)	☐	Other *(please specify)*:	☐
The Trade Desk DSP	☐	Don't know/Unsure	☐
Quantcast	☐		

Continue »

68%

AD PROS™
ADVERTISER PERCEPTIONS

Why did you and/or your business unit/team use more than one ad buying tool for **programmatic display advertising** in the past year?
(Please type in your response or select "Don't know/Unsure".)

☐ Don't know/Unsure

Continue »

69%

AD PROS™
ADVERTISER PERCEPTIONS

Do you and/or your business unit/team expect to use the same number, more, or fewer ad buying tools for **programmatic display advertising** next year?

(Please select only one option.)

- ◯ I expect to use **more** ad buying tools for programmatic display advertising next year.
- ◯ I expect to use the **same number** of ad buying tools for programmatic display advertising next year.
- ◯ I expect to use **fewer** ad buying tools for programmatic display advertising next year.
- ◯ Don't know/Unsure

Continue »

72%

AD PROS™
ADVERTISER PERCEPTIONS

You indicated that, compared to the past year, you expect to use **more** ad buying tools for programmatic display advertising next year. Why do you and/or your business unit/team expect to use **more** ad buying tools for **programmatic display advertising** next year?

(Please type in your response, or select "Don't know/Unsure".)

Don't know/Unsure

Continue »

74%

AD PROS™
ADVERTISER PERCEPTIONS

Which of the following factors, if any, do you and/or your business unit/team consider when deciding to use a particular ad buying tool for **programmatic display advertising**?
(Please select all that apply.)

- [ ] Audience scale/Reach
- [ ] Cost
- [ ] Identity management
- [ ] Reporting features
- [ ] API and integrations
- [ ] Brand safety/fraud protection
- [ ] Forecasting tools
- [ ] Media optimization of placements during a campaign
- [ ] Support
- [ ] Ease of use/User interface
- [ ] Ad placement effectiveness
- [ ] Budget management tools
- [ ] Targeting criteria and capabilities
- [ ] Troubleshooting capabilities
- [ ] Other *(please specify)*: ______
- [ ] Don't know/Unsure

Continue »

76%

AD PROS™
ADVERTISER PERCEPTIONS

Have you and/or your business unit/team stopped using any ad buying tool(s) for **programmatic display advertising** in the **past year**?

(Please select only one option.)

- Yes, I and/or my business unit/team stopped using at least one ad buying tool in the past year.
- No, I and/or my business unit/team have **not** stopped using any ad buying tools in the past year.
- Don't know/Unsure

Continue »

80%

AD PROS™
ADVERTISER PERCEPTIONS

You indicated that you and/or your business unit/team stopped using at least one ad buying tool in the **past year** for **programmatic display advertising**. What factors led you and/or your business unit/team to stop using one or more ad buying tools for **programmatic display advertising**?

(Please type your response in the text box below or select "Don't know/Unsure".)

☐ Don't know/Unsure

Continue »

81%

AD PROS™
ADVERTISER PERCEPTIONS

Have you and/or your business unit/team started using any ad buying tool(s) in the **past year** for **programmatic display advertising**?

(Please select only one option.)

- Yes, I and/or my business unit/team started using at least one ad buying tool in the past year.
- No, I and/or my business unit/team have **not** started using any ad buying tools in the past year.
- Don't know/Unsure

Continue »

84%

AD PROS™
ADVERTISER PERCEPTIONS

You indicated that you and/or your business unit/team started using at least one ad buying tool in the **past year** for **programmatic display advertising.** What factors led you and/or your business unit/team to start using one or more ad buying tools for **programmatic display advertising**?

(Please type your response in the text box below or select "Don't know/Unsure".)

☐ Don't know/Unsure

Continue »

85%

AD PROS™
ADVERTISER PERCEPTIONS

Which of the following metrics, if any, are you and/or your business unit/team using to assess the performance of programmatic display ads, direct deals display ads, social media ads and/or digital video ads?

To review the advertising type descriptions, hover your mouse over each digital advertising type.
(Please select all that apply in each column.)

	Programmatic display ads	Digital video ads	Social media ads	Direct deals display ads
Return on Ad Spend (ROAS)	☐	☐	☐	☐
Conversions	☐	☐	☐	☐
Clicks	☐	☐	☐	☐
Click through rate (CTR)	☐	☐	☐	☐
Impressions	☐	☐	☐	☐
Cost per action (CPA)	☐	☐	☐	☐
Cost per click (CPC)	☐	☐	☐	☐
Return on Investment (ROI)	☐	☐	☐	☐
Cost per impression (CPM)	☐	☐	☐	☐
Other *(please specify)*:	☐			
Other *(please specify)*:				☐
Other *(please specify)*:			☐	
Other *(please specify)*:		☐		
None of the above	☐	☐	☐	☐
Don't know/Unsure	☐	☐	☐	☐

Continue »

87%

AD PROS™
ADVERTISER PERCEPTIONS

You indicated that you and/or your business unit/team use the following metrics to assess the performance of **programmatic display ads.** Please rank these metrics in terms of how **important they are to accurately assessing the performance** of **programmatic display ads**, with 1 being the most important and 3 being the least important.

(Please rank the following metrics, or select "Don't know/Unsure".)

Return on Ad Spend (ROAS)

Clicks

Cost per click (CPC)

Don't know/Unsure

Rank 1

Rank 2

Rank 3

Continue »

89%

AD PROS™
ADVERTISER PERCEPTIONS

How often, if at all, do you and/or your business unit/team measure or assess the performance of your **programmatic display advertising**?
(Please select only one option.)

If you are using an ad agency and they are responsible for measuring or assessing performance of your programmatic display advertising, please indicate how often you receive information about the performance of your programmatic display advertising from the agency.

- Annually
- Quarterly
- Monthly
- Weekly
- Daily
- Don't know/Unsure

Continue »

92%

AD PROS™
ADVERTISER PERCEPTIONS

In the past year, have you and/or your business unit/team run any experimental or test & learn initiatives on your **programmatic display ads**?

(Please select only one option.)

- Yes
- No
- Don't know/Unsure

Continue »

95%

AD PROS™
ADVERTISER PERCEPTIONS

Which of the following types of experiments or test & learn initiatives, if, any, have you and/or your business unit/team run in the past year on your **programmatic display ads**?

I and/or my business unit/team have run experiments and/or test & learn initiatives testing...
(Please select all that apply.)

- ☐ Bid strategies
- ☐ Publishers
- ☐ Creatives
- ☐ Ad buying tool performance
- ☐ Audiences
- ☐ ROI/ROAS
- ☐ Other *(please specify)*: ______
- ☐ Don't know/Unsure

Continue »

FOLLOW UP QUESTION

99%

AD PROS™
ADVERTISER PERCEPTIONS

This survey is being conducted by consultants that have been retained on behalf of Google in connection with pending antitrust lawsuits in which the plaintiffs allege that Google engaged in anticompetitive conduct related to digital advertising.

If you are willing to participate in this survey, please click “Include my responses” below. As a reminder, your responses will be kept anonymous and will be analyzed as part of a larger sample of responses.

If you do not want to participate in this survey, please click “Exclude my responses” below.

- Include my responses
- Exclude my responses

Finish

AD PROS™
ADVERTISER PERCEPTIONS

Thank you for taking our survey. Your efforts are greatly appreciated!

APPENDIX F.3
HIGHER-SPEND ADVERTISER SURVEY RAW DATA

PRODUCED AS NATIVE

APPENDIX G
LOWER-SPEND ADVERTISER SURVEY

APPENDIX G.1
LOWER-SPEND ADVERTISER SURVEY SCRIPT

Lower-Spend Advertiser Survey
Screener and Main Survey Programmer Instructions

LEGEND:

[PROGRAMMER NOTES IN BOLD CAPS AND BRACKETS]
Notes to respondent in italics

FORMAT: The survey consists of the following sections:

Introduction & Screening (questions labeled QS)
Main Survey Questions (questions labeled Q)
Follow-Up Questions (questions labeled QF)

Overview

[NO RESPONDENTS TO BE CONTACTED AT COMPANIES FROM THE LIST OF ENTITIES TO BE EXCLUDED]

[PANEL CONSISTS OF RESPONDENTS WHO ARE 18+, BASED IN THE U.S., AND WHOSE JOB FUNCTION RELATES TO MARKETING AND/OR ADVERTISING]

[TARGET 300 COMPLETES]

[DISABLE THE BROWSER'S "BACK" BUTTON AND DO NOT SHOW A "BACK" BUTTON WITHIN THE SURVEY]

[FORCE RESPONSES TO ANSWER ALL QUESTIONS UNLESS OTHERWISE SPECIFIED]

[DISPLAY ONE QUESTION PER PAGE UNLESS OTHERWISE SPECIFIED]

[NO SURVEY OR SECTION TITLES TO BE DISPLAYED TO RESPONDENTS]

[DIGITAL FINGERPRINTING SHOULD BE USED TO AVOID REPEAT PARTICIPATION]

[TEXT FOR TERMINATES: "THANK YOU FOR YOUR INTEREST IN OUR STUDY. YOU DO NOT QUALIFY FOR THIS STUDY. WE APPRECIATE YOUR TIME."]

Introduction and Screening

QS1. Please enter the code exactly as it appears in the box below, and then click "Continue" to continue.

[INSERT CAPTCHA; TERMINATE AFTER THREE INCORRECT ATTEMPTS]

QS2. Thank you for participating in our study. Your opinions are very important to us. If you don't know an answer to a question or if you don't have an opinion, please don't guess. Simply indicate this in your response by selecting the "Don't know / Unsure" option. There are no right or wrong answers.

Your responses will be kept anonymous and will be analyzed as part of a larger sample of responses. The results of this study will not be used to try to sell you anything.

If you wear glasses or corrective lenses when using a desktop computer, laptop computer, or tablet, please wear them throughout the survey.

Please do not use the "Back" button of your browser while taking the survey. When you are ready to get started, please select the "Continue" button.

QS3. What is your age? (*Please select only one option.*)

[FLIP ORDER PER RESPONDENT, AS IS AND REVERSE; KEEP "PREFER NOT TO ANSWER" LAST]

⦿ Under 18 **[TERMINATE]**
⦿ 18 - 34
⦿ 35 - 49
⦿ 50 - 64
⦿ 65 or above
⦿ Prefer not to answer **[TERMINATE]**

QS4. What is your gender? (*Please select only one option.*)

[RANDOMIZE; KEEP "OTHER" AND "PREFER NOT TO ANSWER" LAST]

⦿ Male
⦿ Female
⦿ Other: **[INSERT TEXT BOX]**
⦿ Prefer not to answer

QS5. In which state do you live? (*Please select only one option.*)

[INSERT DROP DOWN MENU OF ALL 50 STATES AND DC, PLUS "OTHER" AND "DON'T KNOW / UNSURE"]

[TERMINATE IF "OTHER" OR "DON'T KNOW / UNSURE" IS SELECTED]

QS6. Which of the following do you have any involvement in as part of your job responsibilities? *(Please select all that apply.)*

[RANDOMIZE; KEEP "OTHER" LAST]

- ❒ Hiring/HR
- ❒ IT/Tech
- ❒ Business intelligence/Data science
- ❒ Sales or account management
- ❒ Accounting/Finance
- ❒ Advertising or Marketing
- ❒ Website/Mobile App design/development
- ❒ Customer relationship management
- ❒ Data analysis/statistics
- ❒ Other *(specify):*

[TERMINATE IF "Advertising or Marketing" IS NOT SELECTED]

QS7. Which of the following best characterizes the type of company you work for? (*Please select only one option.*)

[RANDOMIZE; KEEP "OTHER" LAST]

- ⦿ **Products/Services Business** – your company sells products or services and advertises/markets its products or services
- ⦿ **Creative Agency** – your company designs or produces marketing content and/or advises clients on their creative media/marketing strategies **[TERMINATE]**
- ⦿ **Media Agency** – your company advises clients on their media/marketing strategies and/or how to spend their advertising funds **[TERMINATE]**
- ⦿ **Full Service Agency** – your company handles both Creative and Media strategy and/or execution **[TERMINATE]**
- ⦿ **Other** (*please describe*)**: [INSERT TEXT BOX] [TERMINATE]**

QS8. Which of the following, if any, best characterizes the market sector/industry your company is in? (*Please select only one option.*)

[DO NOT RANDOMIZE]

- ⦿ Advertising or Marketing
- ⦿ Apparel/Fashion
- ⦿ Automotive
- ⦿ B2B/Services for Businesses
- ⦿ Consumer Electronics
- ⦿ Education
- ⦿ Financial Products/Services for Consumers (including Fintech)
- ⦿ Food and Beverage
- ⦿ Government
- ⦿ Health and Beauty Products
- ⦿ Home Products/Appliances
- ⦿ Health Care or Medical Services
- ⦿ Media and Entertainment
- ⦿ Non-Profit
- ⦿ Pharmaceuticals and Remedies (Rx or OTC)
- ⦿ Restaurants
- ⦿ Retail (including Ecommerce)
- ⦿ Telecommunications
- ⦿ Travel and Hospitality
- ⦿ Other (*Please describe*): **[INSERT TEXT BOX]**

QS9. Which of the following best characterizes your current job title/level? (*Please select only one option.*)

[RANDOMIZE; KEEP "OTHER" LAST]

- ⦿ C-Level (CEO, COO, CMO, etc.)
- ⦿ Vice President, SVP, EVP, President, etc.
- ⦿ Director
- ⦿ Supervisor/Department Head/Group Manager
- ⦿ Manager
- ⦿ Strategist
- ⦿ Associate
- ⦿ Analyst
- ⦿ Buyer
- ⦿ Planner
- ⦿ Other (*please describe*): **[INSERT TEXT BOX]**

QS10. Approximately how much did your company spend in the last 12 months on all advertising, including all digital types (e.g., display, video, audio, social) plus all nondigital types (e.g., TV types, print, OOH, etc.)? (*Please select only one option.*)

[FLIP ORDER PER RESPONDENT, AS IS AND REVERSE; KEEP "DON'T KNOW / UNSURE" LAST]

⦿ Less than $10,000
⦿ $10,000 to less than $25,000
⦿ $25,000 to less than $50,000
⦿ $50,000 to less than $100,000
⦿ $100,000 to less than $250,000
⦿ $250,000 to less than $500,000
⦿ $500,000 to less than $1 million **[TERMINATE]**
⦿ $1 million to less than $3 million **[TERMINATE]**
⦿ $3 million to less than $7 million **[TERMINATE]**
⦿ $7 million to less than $15 million **[TERMINATE]**
⦿ $15 million to less than $30 million **[TERMINATE]**
⦿ $30 million to less than $50 million **[TERMINATE]**
⦿ $50 million to less than $100 million **[TERMINATE]**
⦿ $100 million to less than $250 million **[TERMINATE]**
⦿ $250 million to less than $500 million **[TERMINATE]**
⦿ $500 million or more **[TERMINATE]**
⦿ Don't know / Unsure **[TERMINATE]**

QS11. Please think about your total advertising budget. In the past year, what percentage of your total advertising budget was used for **digital (online) advertising**, as opposed to **offline advertising**? Please give your best estimate. *(Please enter a number from 0 to 100 for each type of advertising, or select "Don't know / Unsure." Values must add up to 100%)*

[FOR ERRORS, DISPLAY THE FOLLOWING ERROR MESSAGE: "Please enter a whole number between 0 and 100 for each advertising type, or select "Don't know / Unsure." Values must add up to 100**"][SHOW TOTAL AT BOTTOM]**

[RANDOMIZE ORDER, KEEP "DON'T KNOW / UNSURE" LAST]

Percentage of budget spent on **digital (online) advertising** last year: [ ]
Percentage of budget spent on **offline advertising** last year: [ ]
TOTAL **[SHOW SUM OF NUMBERS ABOVE]**

⦿ Don't know / Unsure **[EXCLUSIVE]**

[TERMINATE IF DIGITAL (ONLINE) = 0]

QS12. Which of the following types of **digital advertising**, if any, have you used in the past year? Please review the description of each advertising type **carefully**. *(Please select all that apply.)*

[RANDOMIZE ORDER; KEEP "OTHER" AND "DON'T KNOW / UNSURE" LAST]

	Advertising Type	Description
❒	Search	Digital ads placed on search engine result pages. Ads generally consist of a headline, description, and a link to the destination URL.
❒	Display	Digital ads made up of text, image, video, and/or other multimedia components that typically appear along the top or sides of a website, or sometimes in the middle of other content on a website. Examples of display ad formats include banner ads, animations, and interactive content. Display ads do not include ads placed on social media platforms.
❒	Email	Digital ads sent via email to current and potential customers.
❒	Digital Audio	Recorded advertisements that play between or during songs, podcasts, or other digital audio content.
❒	Social	Digital ads placed on social media platforms such as Facebook, Instagram, LinkedIn, Snapchat, and Twitter.
❒	App/In-App	Digital ads placed and displayed within mobile apps. Does not include ads placed on social media platforms.
❒	Digital Video	Includes video ads that appear before, during, or after digital content in a video player, such as YouTube.
❒	Connected TV	Includes digital advertising that appears on home screens of CTV devices and in-stream video ads that appear on CTVs from platforms like Hulu, Roku and YouTube. CTVs are TV sets connected to the internet through built-in internet capability or through another device such as a Blu-ray player, game console, set-top box (e.g., Apple TV, Google Chromecast, Roku), etc.
❒	eCommerce Platforms	Digital ads that appear on eCommerce platforms, such as Amazon.com or Instacart.
❒	Other *(specify and explain):* **[INSERT TEXT BOX]**	
⦿ Don't know / Unsure **[EXCLUSIVE]**		

[TERMINATE IF "DISPLAY" IS NOT SELECTED]

QS13. In which of the following ways have you personally been involved in your company's **digital display** advertising efforts in the **last 12 months**? (*Select all that apply.*)

[RANDOMIZE; KEEP "NONE OF THE ABOVE" AND "DON'T KNOW / UNSURE" LAST]

- ❒ I determine overall strategies and/or budgets for digital display.
- ❒ I determine which tools and/or platforms to use for digital display.
- ❒ I regularly use self-serve ad platforms to manage digital display campaigns.
- ❒ I oversee a team/individuals that use(s) self-serve ad platforms to manage digital display campaigns.
- ❒ I regularly set up audience/target parameters for digital display campaigns.
- ❒ I measure results of digital display campaigns.
- ⦿ None of the above **[EXCLUSIVE] [TERMINATE]**
- ⦿ Don't know / Unsure **[EXCLUSIVE] [TERMINATE]**

[TERMINATE IF NONE OF "I determine overall strategies and/or budgets for digital display**", "**I determine which tools and/or platforms to use for digital display**", "**I regularly use self-serve ad platforms to manage digital display campaigns**", AND "**I oversee a team/individuals that use(s) self-serve ad platforms to manage digital display campaigns**" ARE SELECTED]**

QS14. This question is testing whether or not you're paying attention while taking this survey. Please select "Somewhat likely" below. (*Please select only one option.*)

[FLIP ORDER PER RESPONDENT, AS IS AND REVERSE; KEEP "DON'T KNOW / UNSURE" LAST]

- ⦿ Not at all likely **[TERMINATE]**
- ⦿ Not likely **[TERMINATE]**
- ⦿ Neither unlikely nor likely **[TERMINATE]**
- ⦿ Somewhat likely
- ⦿ Very likely **[TERMINATE]**
- ⦿ Don't know / Unsure **[TERMINATE]**

Main Questionnaire

Q1. You have been selected to answer questions about advertising practices you have used. For each question, if you don't know or are unsure, please don't guess. Simply indicate this in your response by selecting the "Don't know / Unsure" option. There are no right or wrong answers.

Also, you should complete this survey without stopping in the middle. Please make sure not to consult anyone; use your browser's "Back" button; or open another browser while working on this survey.

Use of Ad Agencies

Q2. Do you or do you not use an ad agency and/or a consultant for digital advertising? *(Please select one option.)*

[FLIP ORDER PER RESPONDENT, AS IS AND REVERSE; KEEP "DON'T KNOW / UNSURE" LAST]

- ⦿ Yes, I use an ad agency and/or a consultant for digital advertising
- ⦿ No, I do **not** use an ad agency and/or a consultant for digital advertising
- ⦿ Don't know / Unsure

Q3. **[IF RESPONDENT SELECTED "YES" IN Q2]** For which, if any, of the following do you use an ad agency and/or a consultant? *(Please select all that apply.)*

[RANDOMIZE ORDER; KEEP "OTHER," "NONE OF THE ABOVE," AND "DON'T KNOW / UNSURE" LAST]

- ❒ Content and/or creatives
- ❒ Consulting services
- ❒ Media/marketing strategies
- ❒ Allocating advertising funds across advertising types
- ❒ Budgeting decisions
- ❒ Customer research
- ❒ Implementation of advertising (e.g., placing bids, interacting with DSPs)
- ❒ Tracking advertising performance
- ❒ Inventory access
- ❒ Running advertising tests/experiments
- ❒ Other (*specify*): **[INSERT TEXT BOX]**
- ⦿ None of the above **[EXCLUSIVE]**
- ⦿ Don't know / Unsure **[EXCLUSIVE]**

Advertising Channels and Usage

Q4. You mentioned that you have used **digital display advertising** in the **last 12 months**.

Digital display ads are digital ads made up of text, image, video and/or other multimedia components that typically appear along the top or sides of a website, or sometimes in the middle of other content on a website. Examples of display ad formats include banner ads, animations, and interactive content. Display ads do not include ads placed on social media platforms.

Which of the following platforms, if any, have you used during the **last 12 months** for **digital display advertising**? *(Please select all that apply)*

[RANDOMIZE ORDER; KEEP "OTHER," "NONE OF THE ABOVE", AND "DON'T KNOW / UNSURE" LAST]

- ❒ Google Ads
- ❒ Google Display and Video 360 (DV360)
- ❒ Adobe Advertising Cloud
- ❒ Amazon DSP
- ❒ Amobee
- ❒ MediaMath
- ❒ Quantcast
- ❒ The Trade Desk
- ❒ Yahoo DSP (formerly Verizon Media)
- ❒ Criteo
- ❒ Ad Step Technologies
- ❒ Other *(please specify)*: **[TEXT BOX]**
- ⦿ Don't know / Unsure **[EXCLUSIVE]**

Q5. **[IF "SOCIAL" WAS SELECTED IN QS12]** You indicated that you have used **social advertising** in the **last 12 months**.

Social ads are digital ads placed on social media platforms such as Facebook, Instagram, LinkedIn, Snapchat, and Twitter.

Which of the following platforms, if any, have you used during the **last 12 months** for **social advertising**? *(Please select all that apply.)*

[RANDOMIZE ORDER; KEEP "OTHER," "NONE OF THE ABOVE", AND "DON'T KNOW / UNSURE" LAST]

- ❒ Facebook
- ❒ Instagram
- ❒ Pinterest
- ❒ Snapchat
- ❒ TikTok

- ❒ Twitter
- ❒ LinkedIn
- ❒ Reddit
- ❒ Tumblr
- ❒ FriendLinx
- ❒ Other social media platforms *(specify)*: **[INSERT TEXT BOX]**
- ⦿ Don’t know / Unsure **[EXCLUSIVE]**

Q6. What factors do you consider when deciding where to buy **digital ads** from? *(Please type your response in the text box below, or select “Don’t know / Unsure”.)*

[INSERT TEXT BOX]
[REQUIRE AT LEAST 4 CHARACTERS; IF ENTRY IS LESS THAN 4 CHARACTERS, SHOW ERROR “*Please be thorough in your response.”***]**
⦿ Don’t know / Unsure **[EXCLUSIVE] [SKIP TO QS8]**

Q7. In addition to the factors you just mentioned, what other factors, if any, do you consider when deciding where to buy **digital ads** from?

[INSERT TEXT BOX]
[REQUIRE AT LEAST 4 CHARACTERS; IF ENTRY IS LESS THAN 4 CHARACTERS, SHOW ERROR “*Please be thorough in your response.”***]**
⦿ Don’t know / Unsure **[EXCLUSIVE]**

Budget Allocation and Substitution

Q8. The following questions pertain to **digital advertising**.

Previously, you mentioned that you have used the following types of **digital advertising** in the past year. What is your best estimate of the share of your **digital advertising spending** that was used for each of these types of advertising in the past year? Specifically, please allocate 100% across the different types of digital advertising shown below based on the share of your total digital advertising spending on each type. The total should add up to 100%.

To review the advertising type descriptions, hover your mouse over each digital advertising type.

(Please enter a number from 0 to 100 in each cell, or select "Don't know / Unsure." Please make sure that numbers add up to 100.)

[SHOW ALL ANSWER OPTIONS SELECTED IN QS12 WITH TEXT BOX REQUIRING WHOLE NUMBER BETWEEN 0 AND 100. RANDOMIZE ORDER; KEEP "OTHER" AND "DON'T KNOW / UNSURE" LAST. SHOW RUNNING TOTAL AT THE BOTTOM OF THE PAGE WITH THE SUM OF THE NUMBERS ENTERED]

[DISPLAY DESCRIPTIONS FROM QS12 WHEN RESPONDENT HOVERS OVER TYPE OF ADVERTISING]

[THE SUM OF ALL NUMBERS MUST EQUAL 100. IF RESPONDENT CLICKS "NEXT" AND THE SUM OF THE NUMBERS IS NOT EQUAL TO 100, SHOW THE FOLLOWING ERROR MESSAGE: "Sorry, your answers do not add up to 100. Please try again.**"]**

[FOR ALL OTHER ERRORS, DISPLAY THE FOLLOWING ERROR MESSAGE: "Please specify a whole number in each cell, and do not leave any cell blank. Please enter 0 if you do not spend any portion of your advertising budget on a type of advertising.**"]**

Search:	
Display:	
Email:	
Digital Audio:	
Social:	
App/In-App:	
Digital Video:	
Connected TV:	
eCommerce Platforms:	

Other	☐
TOTAL	**[SHOW SUM OF NUMBERS ABOVE]**

⦿ Don’t know / Unsure **[EXCLUSIVE]**

Q9. Please read carefully. Now suppose that, based on your analysis, the cost of **display advertising** has **recently increased by a small but significant amount, and will remain elevated for the foreseeable future**. Assume further that, based on similar analyses for other digital advertising types, the **costs of other digital advertising types** have **not** changed and are not expected to change.

So, if the cost of display advertising increases (while the cost of other advertising types remains the same), will you or won’t you divert some of your advertising spending for the coming year to other types of digital advertising?

[FLIP ORDER PER RESPONDENT, AS IS AND REVERSE; KEEP “DON’T KNOW / UNSURE” LAST]

- ⦿ Yes, I will divert some of my advertising spending for the coming year to other types of digital advertising
- ⦿ No, I will **not** divert any of my advertising spending for the coming year to other types of digital advertising **[SKIP TO Q12]**
- ⦿ Don’t know / Unsure **[SKIP TO Q12]**

Q10. To which other types of digital advertising below, if any, would you divert your advertising spending for the coming year as a result of the **increase in the cost of display advertising**?

To review the advertising type descriptions, hover your mouse over each digital advertising type.

(Please select all that apply.)

[RANDOMIZE ORDER; KEEP “OTHER,” “NONE OF THE ABOVE” AND “DON’T KNOW / UNSURE” LAST]

[DISPLAY DESCRIPTIONS FROM QS12 WHEN RESPONDENT HOVERS OVER TYPE OF ADVERTISING]

- ❒ Search
- ❒ Email
- ❒ Digital Audio
- ❒ Social
- ❒ App/In-App
- ❒ Digital Video
- ❒ Connected TV

❒ eCommerce Platforms
❒ Other
⦿ None of the above **[EXCLUSIVE] [SKIP TO Q12]**
⦿ Don’t know / Unsure **[EXCLUSIVE] [SKIP TO Q12]**

Q11. In your previous answer, you indicated that the increase in the cost of display advertising will lead you to divert some of your advertising spending to the types of digital advertising listed below.

Please use the sliders below to indicate, on a scale of **0** to **10**, the extent to which you would divert (that is, increase) advertising spending for the coming year to **each type of digital advertising** that you just indicated.

For each digital advertising type below, please select **0** if you expect to keep spending on that type of digital advertising for the coming year and **10** if you expect to substantially increase spending on that type of digital advertising.

To review the advertising type descriptions, hover your mouse over each digital advertising type.

[SHOW ANSWER OPTIONS SELECTED IN Q10. MATCH ORDER OF RESPONSES TO Q10. FOR EACH ADVERTISING TYPE, SHOW SLIDER FROM 0 TO 10, LABEL 0 “KEEP THE SAME” AND 10 “SUBSTANTIALLY INCREASE”. INCLUDE OPTION FOR “DON’T KNOW / UNSURE”.]

[DISPLAY DESCRIPTIONS FROM QS12 WHEN RESPONDENT HOVERS OVER TYPE OF ADVERTISING]

Search	**[INSERT SLIDER]**	⦿ Don’t know / Unsure
Email	**[INSERT SLIDER]**	⦿ Don’t know / Unsure
Digital Audio	**[INSERT SLIDER]**	⦿ Don’t know / Unsure
Social	**[INSERT SLIDER]**	⦿ Don’t know / Unsure
App/In-app	**[INSERT SLIDER]**	⦿ Don’t know / Unsure
Digital Video	**[INSERT SLIDER]**	⦿ Don’t know / Unsure
Connected TV	**[INSERT SLIDER]**	⦿ Don’t know / Unsure
eCommerce Platforms	**[INSERT SLIDER]**	⦿ Don’t know / Unsure
Other	**[INSERT SLIDER]**	⦿ Don’t know / Unsure

Measuring Performance

Q12. **[ONLY INCLUDE ADVERTISING TYPES SELECTED IN QS12]** Which of the following metrics, if any, are you using to assess the performance of **display ads [IF "SOCIAL" WAS SELECTED IN QS12,** and/or **social media ads]**?

To review the advertising type descriptions, hover your mouse over each digital advertising type.
(Please select all that apply in each column.)

[RANDOMIZE ORDER OF ROWS, KEEP "OTHER," "NONE OF THE ABOVE," AND "DON'T KNOW / UNSURE" LAST. RANDOMIZE ORDER OF COLUMNS]

[DISPLAY DESCRIPTIONS FROM QS12 WHEN RESPONDENT HOVERS OVER TYPE OF ADVERTISING]

Metric	Display ads	Social media ads
Impressions	❒	❒
Clicks	❒	❒
Conversions	❒	❒
Cost per impression (CPM)	❒	❒
Cost per click (CPC)	❒	❒
Cost per action (CPA)	❒	❒
Return on Ad Spend (ROAS)	❒	❒
Return on Investment (ROI)	❒	❒
Click through rate (CTR)	❒	❒
Other *(please specify)*: **[TEXT BOX]**	❒	❒
None of the above **[EXCLUSIVE]**	⦿	⦿
Don't know / Unsure **[EXCLUSIVE]**	⦿	⦿

Q13. **[ONLY IF MORE THAN ONE METRIC UNDER DISPLAY ADS ARE SELECTED IN Q12]** The following questions pertain to **digital display advertising**.

You indicated that you use the following metrics to assess the performance of **digital display ads**. Please rank these metrics in terms of **how important they are to accurately assessing the performance** of **digital display ads**, with 1 being the most important and **[NUMBER OF MEASURES SELECTED UNDER DISPLAY ADS IN Q12]** being the least important. *(Please rank the following metrics, or select "Don't know / Unsure")*

[HAVE RESPONDENTS ASSIGN A RANK FROM 1 TO THE NUMBER OF RESPONSES SELECTED UNDER DISPLAY ADS IN Q12 FOR EACH PERFORMANCE METRIC]

⦿ Don't know / Unsure **[EXCLUSIVE]**

Q14. How often, if at all, do you assess the performance of your **digital display advertising**? *(Please select only one option)*

If you are using an ad agency and/or a consultant and they are responsible for measuring or assessing performance of your display advertising, please indicate how often you receive information about the performance of your **digital display advertising** from the agency.

[RANDOMIZE ORDER AS IS AND REVERSE; KEEP "DON'T KNOW / UNSURE" LAST]

- ⦿ Daily
- ⦿ Weekly
- ⦿ Monthly
- ⦿ Quarterly
- ⦿ Annually
- ⦿ Don't know / Unsure

Q15. In the past year, have you run any experiments or test & learn initiatives on your **digital display ads**? *(Please select only one option.)*

[RANDOMIZE ORDER AS IS AND REVERSE; KEEP "DON'T KNOW / UNSURE" LAST]

- ⦿ Yes
- ⦿ No
- ⦿ Don't know / Unsure

Q16. **[IF "YES" IN Q15]** Which of the following types of experiments or test & learn initiatives, if any, have you run in the past year on your **digital display ads**?

I have run experiments and/or test & learn initiatives testing… *(Please select all that apply.)*

[RANDOMIZE ORDER, KEEP "OTHER" AND "DON'T KNOW / UNSURE" LAST]

- ❒ Creatives
- ❒ Bid strategies
- ❒ Audiences
- ❒ Publishers
- ❒ Ad buying tool performance
- ❒ ROI/ROAS
- ❒ Other *(please specify)*: **[TEXT BOX]**
- ⦿ Don't know / Unsure **[EXCLUSIVE]**

Follow Up Question

QF1. This survey is being conducted by consultants that have been retained on behalf of Google in connection with pending antitrust lawsuits in which the plaintiffs allege that Google engaged in anticompetitive conduct related to digital advertising.

If you are willing to participate in this survey, please click "Include my responses" below. As a reminder, your responses will be kept anonymous and will be analyzed as part of a larger sample of responses.

If you do not want to participate in this survey, please click "Exclude my responses" below.

[RANDOMIZE ORDER]

- ⦿ Include my responses
- ⦿ Exclude my responses

APPENDIX G.2
LOWER-SPEND ADVERTISER SURVEY SCREENSHOTS

INTRODUCTION AND SCREENING

0%

AD PROS™
ADVERTISER PERCEPTIONS

Please enter the code exactly as it appears in the box below, and then click "Continue" to continue.

YJHEC1

Continue »

3%

AD PROS™
ADVERTISER PERCEPTIONS

Thank you for participating in our study. Your opinions are very important to us. If you don't know an answer to a question or if you don't have an opinion, please don't guess. Simply indicate this in your response by selecting the "Don't know/Unsure" option. There are no right or wrong answers.

Your responses will be kept anonymous and will be analyzed as part of a larger sample of responses. The results of this study will not be used to try to sell you anything.

If you wear glasses or corrective lenses when using a desktop computer, laptop computer, or tablet, please wear them throughout the survey.

Please do not use the "Back" button of your browser while taking the survey. When you are ready to get started, please select the "Continue" button.

Continue »

7%

AD PROS™
ADVERTISER PERCEPTIONS

What is your age?

(Please select only one option.)

- Under 18
- 18 – 34
- 35 – 49
- 50 – 64
- 65 or above
- Prefer not to answer

Continue »

11%

AD PROS™
ADVERTISER PERCEPTIONS

What is your gender?

(Please select only one option.)

- Male
- Female
- Other:
- Prefer not to answer

Continue »

14%

AD PROS™
ADVERTISER PERCEPTIONS

In which state do you live?

(Please select only one option.)

Select one...

Continue »

18%

AD PROS™
ADVERTISER PERCEPTIONS

Which of the following do you have any involvement in as part of your job responsibilities?
(Please select all that apply.)

- [ ] Accounting/Finance
- [ ] Business intelligence/Data science
- [ ] Sales or account management
- [ ] Hiring/HR
- [ ] IT/Tech
- [ ] Data analysis/statistics
- [ ] Customer relationship management
- [ ] Website/Mobile App design/development
- [ ] Advertising or Marketing
- [ ] Other *(specify)*: ______

Continue »

22%

AD PROS™
ADVERTISER PERCEPTIONS

Which of the following best characterizes the type of company you work for?
(Please select only one option.)

- **Media Agency –** your company advises clients on their media/marketing strategies and/or how to spend their advertising funds
- **Full Service Agency –** your company handles both Creative and Media strategy and/or execution
- **Creative Agency –** your company designs or produces marketing content and/or advises clients on their creative media/marketing strategies
- **Products/Services Business –** your company sells products or services and advertises/markets its products or services
- **Other** *(please describe)*:

Continue »

26%

AD PROS™
ADVERTISER PERCEPTIONS

Which of the following, if any, best characterizes the market sector/industry your company is in?
(Please select only one option.)

- Advertising or Marketing
- Apparel/Fashion
- Automotive
- B2B/Services for Businesses
- Consumer Electronics
- Education
- Financial Products/Services for Consumers (including Fintech)
- Food and Beverage
- Government
- Health and Beauty Products
- Home Products/Appliances
- Health Care or Medical Services
- Media and Entertainment
- Non-Profit
- Pharmaceuticals and Remedies (Rx or OTC)
- Restaurants
- Retail (including Ecommerce)
- Telecommunications
- Travel and Hospitality
- Other *(Please describe)*:

Continue »

29%

AD PROS™
ADVERTISER PERCEPTIONS

Which of the following best characterizes your current job title/level?

(Please select only one option.)

- Analyst
- Manager
- Vice President, SVP, EVP, President, etc.
- C-Level (CEO, COO, CMO, etc.)
- Buyer
- Planner
- Strategist
- Associate
- Director
- Supervisor/Department Head/Group Manager
- Other *(please describe)*:

Continue »

33%

AD PROS™
ADVERTISER PERCEPTIONS

Approximately how much did your company spend in the last 12 months on all advertising, including all digital types (e.g., display, video, audio, social) plus all non-digital types (e.g., TV types, print, OOH, etc.)?

(Please select only one option.)

- Less than $10,000
- $10,000 to less than $25,000
- $25,000 to less than $50,000
- $50,000 to less than $100,000
- $100,000 to less than $250,000
- $250,000 to less than $500,000
- $500,000 to less than $1 million
- $1 million to less than $3 million
- $3 million to less than $7 million
- $7 million to less than $15 million
- $15 million to less than $30 million
- $30 million to less than $50 million
- $50 million to less than $100 million
- $100 million to less than $250 million
- $250 million to less than $500 million
- $500 million or more
- Don't know/Unsure

Continue »

37%

AD PROS™
ADVERTISER PERCEPTIONS

Please think about your total advertising budget. In the past year, what percentage of your total advertising budget was used for **digital (online) advertising**, as opposed to **offline advertising**? Please give your best estimate.

(Please enter a number from 0 to 100 for each type of advertising or select "Don't know/Unsure." Values must add up to 100%)

Percentage of budget spent on **offline advertising** last year:	%
Percentage of budget spent on **digital (online) advertising** last year:	%
Don't know/Unsure	
	Total: 0 %

Continue »

40%

AD PROS™
ADVERTISER PERCEPTIONS

Which of the following types of **digital advertising**, if any, have you used in the past year? Please review the description of each advertising type **carefully**.

(Please select all that apply.)

- [ ] **Search** (Digital ads placed on search engine result pages. Ads generally consist of a headline, description, and a link to the destination URL.)
- [ ] **Connected TV** (Includes digital advertising that appears on home screens of CTV devices and in-stream video ads that appear on CTVs from platforms like Hulu, Roku and YouTube. CTVs are TV sets connected to the internet through built-in internet capability or through another device such as a Blu-ray player, game console, set-top box (e.g., Apple TV, Google Chromecast, Roku), etc.)
- [ ] **Social** (Digital ads placed on social media platforms such as Facebook, Instagram, LinkedIn, Snapchat, and Twitter.)
- [ ] **App/In-App** (Digital ads placed and displayed within mobile apps. Does not include ads placed on social media platforms.)
- [ ] **Display** (Digital ads made up of text, image, video, and/or other multimedia components that typically appear along the top or sides of a website, or sometimes in the middle of other content on a website. Examples of display ad formats include banner ads, animations, and interactive content. Display ads do not include ads placed on social media platforms.)
- [ ] **eCommerce Platforms** (Digital ads that appear on eCommerce platforms, such as Amazon.com or Instacart.)
- [ ] **Email** (Digital ads sent via email to current and potential customers.)
- [ ] **Digital Video** (Includes video ads that appear before, during, or after digital content in a video player, such as YouTube.)
- [ ] **Digital Audio** (Recorded advertisements that play between or during songs, podcasts, or other digital audio content.)
- [ ] Other *(specify and explain)*: ____________
- [ ] Don't know/Unsure

Continue »

44%

AD PROS™
ADVERTISER PERCEPTIONS

In which of the following ways have you personally been involved in your company's **digital display** advertising efforts in the **last 12 months**?

(Select all that apply.)

- [ ] I determine which tools and/or platforms to use for digital display.
- [ ] I regularly set up audience/target parameters for digital display campaigns.
- [ ] I regularly use self-serve ad platforms to manage digital display campaigns.
- [ ] I oversee a team/individuals that use(s) self-serve ad platforms to manage digital display campaigns.
- [ ] I measure results of digital display campaigns.
- [ ] I determine overall strategies and/or budgets for digital display.
- [ ] None of the above
- [ ] Don't know/Unsure

Continue »

48%

AD PROS™
ADVERTISER PERCEPTIONS

This question is testing whether or not you're paying attention while taking this survey. Please select "Somewhat likely" below.

(Please select only one option.)

- Not at all likely
- Not likely
- Neither unlikely nor likely
- Somewhat likely
- Very likely
- Don't know/Unsure

Continue »

MAIN QUESTIONNAIRE

52%

AD PROS™
ADVERTISER PERCEPTIONS

You have been selected to answer questions about advertising practices you have used. For each question, if you don't know or are unsure, please don't guess. Simply indicate this in your response by selecting the "Don't know/Unsure" option. There are no right or wrong answers.

Also, you should complete this survey without stopping in the middle. Please make sure not to consult anyone; use your browser's "Back" button; or open another browser while working on this survey.

Continue »

55%

AD PROS™
ADVERTISER PERCEPTIONS

Do you or do you not use an ad agency and/or a consultant for digital advertising?

(Please select one option.)

- ◯ Yes, I use an ad agency and/or a consultant for digital advertising
- ◯ No, I do **not** use an ad agency and/or a consultant for digital advertising
- ◯ Don't know/Unsure

Continue »

59%

AD PROS™
ADVERTISER PERCEPTIONS

For which, if any, of the following do you use an ad agency and/or a consultant?
(Please select all that apply.)

- ☐ Content and/or creatives
- ☐ Budgeting decisions
- ☐ Media/marketing strategies
- ☐ Customer research
- ☐ Implementation of advertising (e.g., placing bids, interacting with DSPs)
- ☐ Allocating advertising funds across advertising types
- ☐ Consulting services
- ☐ Running advertising tests/experiments
- ☐ Tracking advertising performance
- ☐ Inventory access
- ☐ Other *(specify)*: ____
- ☐ None of the above
- ☐ Don't know/Unsure

Continue »

61%

AD PROS™
ADVERTISER PERCEPTIONS

You mentioned that you have used **digital display advertising** in the **last 12 months**.

Digital display ads are digital ads made up of text, image, video and/or other multimedia components that typically appear along the top or sides of a website, or sometimes in the middle of other content on a website. Examples of display ad formats include banner ads, animations, and interactive content. Display ads do not include ads placed on social media platforms.

Which of the following platforms, if any, have you used during the **last 12 months** for **digital display advertising**?
(Please select all that apply.)

- [ ] Google Ads
- [ ] Google Display and Video 360 (DV360)
- [ ] Criteo
- [ ] Quantcast
- [ ] MediaMath
- [ ] Amazon DSP
- [ ] The Trade Desk
- [ ] Amobee
- [ ] Adobe Advertising Cloud
- [ ] Yahoo DSP (formerly Verizon Media)
- [ ] Ad Step Technologies
- [ ] Other *(please specify)*:
- [ ] Don't know/Unsure

Continue »

64%

AD PROS™
ADVERTISER PERCEPTIONS

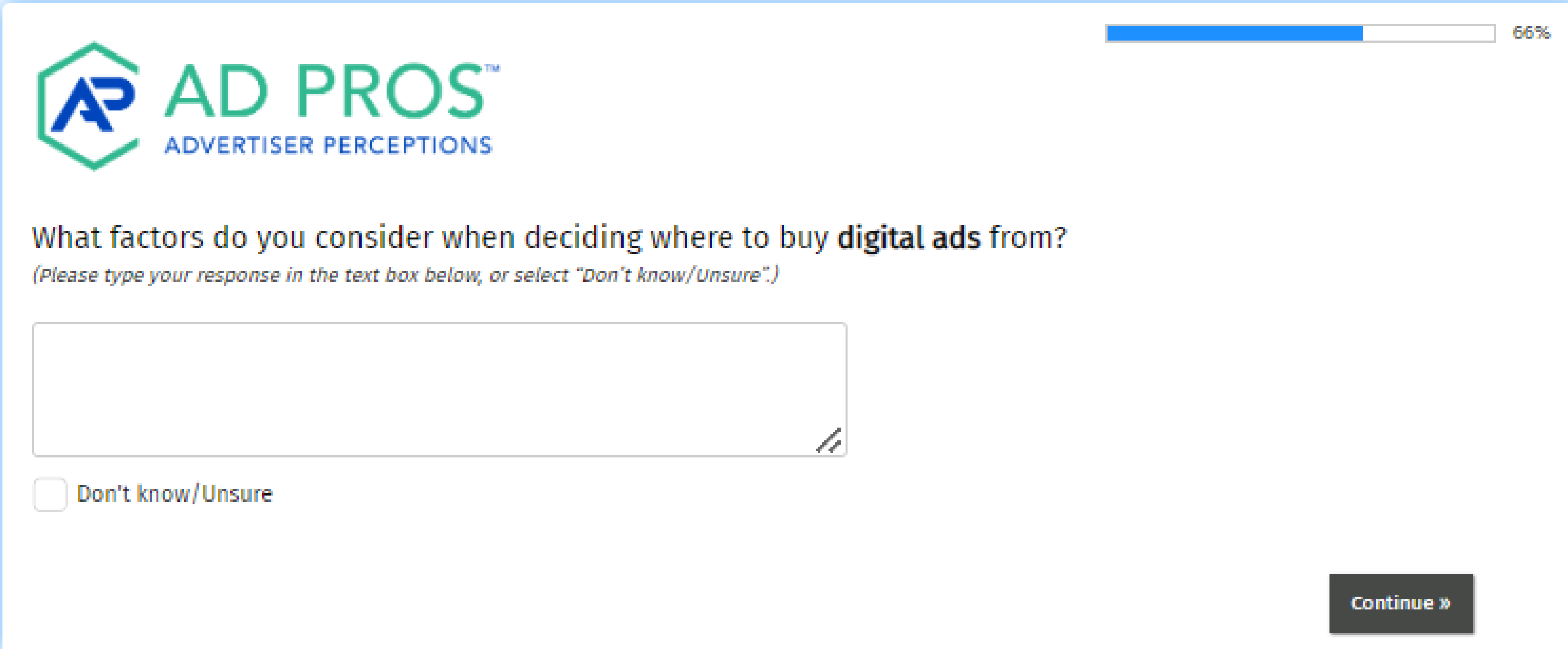
You indicated that you have used **social advertising** in the **last 12 months**.

Social ads are digital ads placed on social media platforms such as Facebook, Instagram, LinkedIn, Snapchat, and Twitter.

Which of the following platforms, if any, have you used during the **last 12 months** for **social advertising**?
(Please select all that apply.)

- Twitter
- TikTok
- Reddit
- Snapchat
- Tumblr
- Instagram
- Pinterest
- FriendLinx
- Facebook
- LinkedIn
- Other social media platforms *(specify)*:
- Don't know/Unsure

Continue »

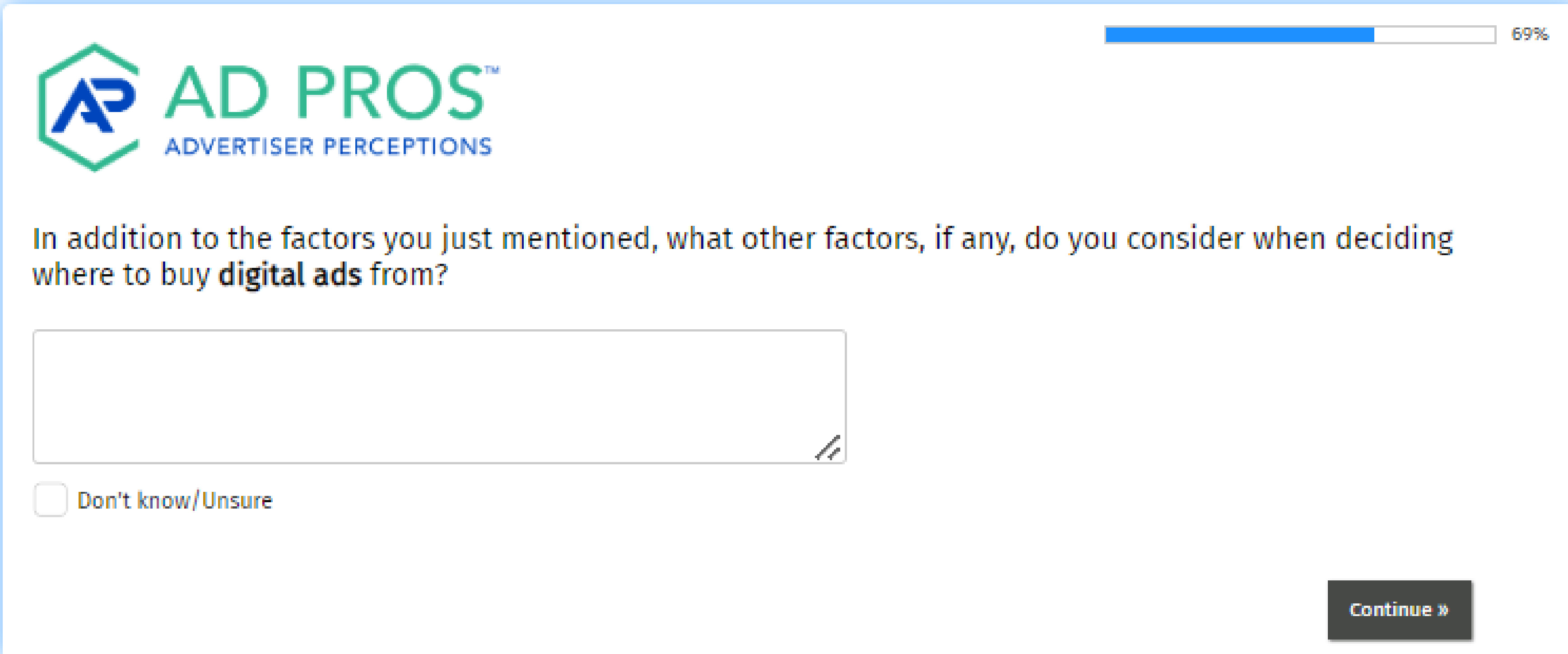

66%

AD PROS™
ADVERTISER PERCEPTIONS

What factors do you consider when deciding where to buy **digital ads** from?
(Please type your response in the text box below, or select "Don't know/Unsure".)

Don't know/Unsure

Continue »


69%
AD PROS™
ADVERTISER PERCEPTIONS
In addition to the factors you just mentioned, what other factors, if any, do you consider when deciding where to buy **digital ads** from?
Don't know/Unsure
Continue »

72%

AD PROS™
ADVERTISER PERCEPTIONS

The following questions pertain to **digital advertising**.

Previously, you mentioned that you have used the following types of **digital advertising** in the past year. What is your best estimate of the share of your **digital advertising spending** that was used for each of these types of advertising in the past year? Specifically, please allocate 100% across the different types of digital advertising shown below based on the share of your total digital advertising spending on each type. The total should add up to 100%.

To review the advertising type descriptions, hover your mouse over each digital advertising type.

(Please enter a number from 0 to 100 in each cell, or select "Don't know/Unsure." Please make sure that numbers add up to 100.)

Search	%
Social	%
Display	%
Don't know/Unsure	
	Total: 0 %

Continue »

76%

AD PROS™
ADVERTISER PERCEPTIONS

Please read carefully. Now suppose that, based on your analysis, the cost of **display advertising** has **recently increased by a small but significant amount, and will remain elevated for the foreseeable future**. Assume further that, based on similar analyses for other digital advertising types, the **costs of other digital advertising types** have not changed and are not expected to change.

So, if the cost of display advertising increases (while the cost of other advertising types remains the same), will you or won't you divert some of your advertising spending for the coming year to other types of digital advertising?

- Yes, I will divert some of my advertising spending for the coming year to other types of digital advertising
- No, I will **not** divert any of my advertising spending for the coming year to other types of digital advertising
- Don't know/Unsure

Continue »

80%

AD PROS™
ADVERTISER PERCEPTIONS

To which other types of digital advertising below, if any, would you divert your advertising spending for the coming year as a result of the **increase in the cost of display advertising**?

To review the advertising type descriptions, hover your mouse over each digital advertising type.
(Please select all that apply.)

- [ ] Search
- [ ] eCommerce Platforms
- [ ] App/In-App
- [ ] Digital Video
- [ ] Email
- [ ] Digital Audio
- [ ] Connected TV
- [ ] Social
- [ ] Other
- [ ] None of the above
- [ ] Don't know/Unsure

Continue »

81%

AD PROS™
ADVERTISER PERCEPTIONS

In your previous answer, you indicated that the increase in the cost of display advertising will lead you to divert some of your advertising spending to the types of digital advertising listed below.

Please use the sliders below to indicate, on a scale of **0** to **10**, the extent to which you would divert (that is, increase) advertising spending for the coming year to **each type of digital advertising** that you just indicated.

For each digital advertising type below, please select **0** if you expect to keep spending on that type of digital advertising for the coming year and **10** if you expect to substantially increase spending on that type of digital advertising.

To review the advertising type descriptions, hover your mouse over each digital advertising type.

Search

0 Keep the same | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 Substantially increase

☐ *Don't know/Unsure*

Social

0 Keep the same | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 Substantially increase

☐ *Don't know/Unsure*

Continue »

83%

AD PROS™
ADVERTISER PERCEPTIONS

Which of the following metrics, if any, are you using to assess the performance of **display ads** and/or **social media ads**?

To review the advertising type descriptions, hover your mouse over each digital advertising type.
(Please select all that apply in each column.)

	Social media ads	Display ads
Click through rate (CTR)	☐	☐
Cost per click (CPC)	☐	☐
Conversions	☐	☐
Return on Ad Spend (ROAS)	☐	☐
Cost per impression (CPM)	☐	☐
Impressions	☐	☐
Clicks	☐	☐
Cost per action (CPA)	☐	☐
Return on Investment (ROI)	☐	☐
Other *(please specify)*: ____		☐
Other *(please specify)*: ____	☐	
None of the above	☐	☐
Don't know/Unsure	☐	☐

Continue »

85%

AD PROS™
ADVERTISER PERCEPTIONS

The following questions pertain to **digital display advertising.**

You indicated that you use the following metrics to assess the performance of **digital display ads.** Please rank these metrics in terms of **how important they are to accurately assessing the performance** of **digital display ads**, with 1 being the most important and 2 being the least important.

(Please rank the following metrics, or select "Don't know/Unsure".)

Return on Ad Spend (ROAS)

Impressions

Rank 1

Rank 2

Don't know/Unsure

Continue »

87%

AD PROS™
ADVERTISER PERCEPTIONS

How often, if at all, do you assess the performance of your **digital display advertising**?
(Please select only one option.)

If you are using an ad agency and/or a consultant and they are responsible for measuring or assessing performance of your display advertising, please indicate how often you receive information about the performance of your **digital display advertising** from the agency.

- Daily
- Weekly
- Monthly
- Quarterly
- Annually
- Don't know/Unsure

Continue »

91%

AD PROS™
ADVERTISER PERCEPTIONS

In the past year, have you run any experiments or test & learn initiatives on your **digital display ads**?

(Please select only one option.)

- No
- Yes
- Don't know/Unsure

Continue »

94%

AD PROS™
ADVERTISER PERCEPTIONS

Which of the following types of experiments or test & learn initiatives, if any, have you run in the past year on your **digital display ads**?

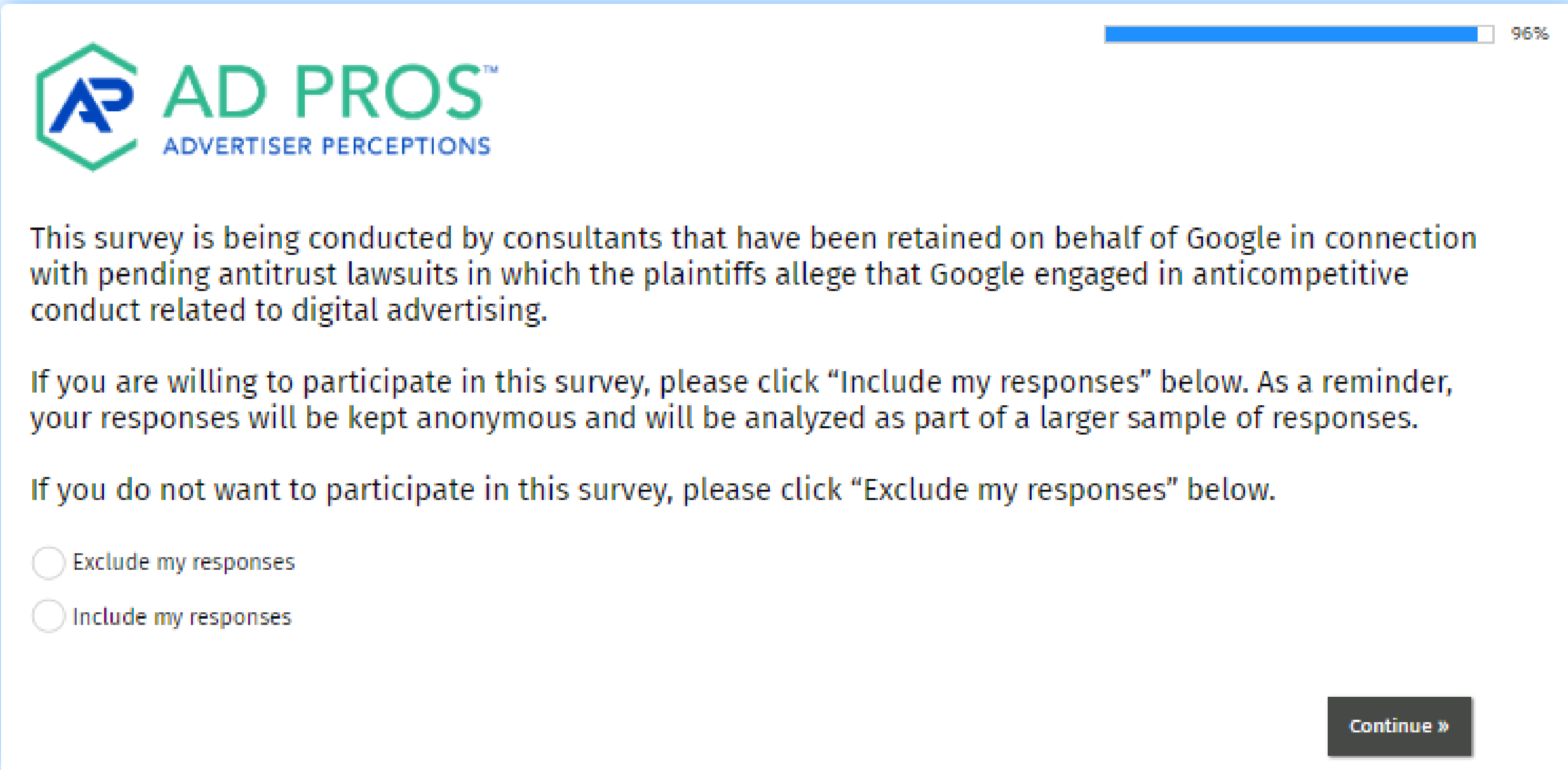
I have run experiments and/or test & learn initiatives testing...

(Please select all that apply.)

- Bid strategies
- Creatives
- Publishers
- ROI/ROAS
- Ad buying tool performance
- Audiences
- Other *(please specify)*:
- Don't know/Unsure

Continue »

FOLLOW UP QUESTION



96%

AD PROS™
ADVERTISER PERCEPTIONS

This survey is being conducted by consultants that have been retained on behalf of Google in connection with pending antitrust lawsuits in which the plaintiffs allege that Google engaged in anticompetitive conduct related to digital advertising.

If you are willing to participate in this survey, please click "Include my responses" below. As a reminder, your responses will be kept anonymous and will be analyzed as part of a larger sample of responses.

If you do not want to participate in this survey, please click "Exclude my responses" below.

- Exclude my responses
- Include my responses

Continue »

AD PROS™
ADVERTISER PERCEPTIONS

Thank you for taking our survey. Your efforts are greatly appreciated!

APPENDIX G.3
LOWER-SPEND ADVERTISER SURVEY RAW DATA

PRODUCED AS NATIVE

APPENDIX H
AGENCY SURVEY

APPENDIX H.1
AGENCY SURVEY SCRIPT

Agency Survey
Screener and Main Survey Programmer Instructions

LEGEND:

[PROGRAMMER NOTES IN BOLD CAPS AND BRACKETS]
Notes to respondent in italics

FORMAT: The survey consists of the following sections:

Introduction & Screening (questions labeled QS)
Main Survey Questions (questions labeled Q)
Follow-Up Questions (questions labeled QF)

Overview

[NO RESPONDENTS TO BE CONTACTED AT COMPANIES FROM THE LIST OF ENTITIES TO BE EXLCUDED]

[PANEL CONSISTS OF RESPONDENTS WHO ARE 18+, BASED IN THE U.S., WORK FOR AN ADVERTISING AGENCY, AND WHOSE JOB FUNCTION RELATES TO MARKETING AND/OR ADVERTISING]

[TARGET 400 COMPLETES]

[DISABLE THE BROWSER'S "BACK" BUTTON AND DO NOT SHOW A "BACK" BUTTON WITHIN THE SURVEY]

[FORCE RESPONSES TO ANSWER ALL QUESTIONS UNLESS OTHERWISE SPECIFIED]

[DISPLAY ONE QUESTION PER PAGE UNLESS OTHERWISE SPECIFIED]

[NO SURVEY OR SECTION TITLES TO BE DISPLAYED TO RESPONDENTS]

[DIGITAL FINGERPRINTING SHOULD BE USED TO AVOID REPEAT PARTICIPATION]

[TEXT FOR TERMINATES: "THANK YOU FOR YOUR INTEREST IN OUR STUDY. YOU DO NOT QUALIFY FOR THIS STUDY. WE APPRECIATE YOUR TIME."]

Introduction and Screening

QS1. Please enter the code exactly as it appears in the box below, and then click "Continue" to continue.

[INSERT CAPTCHA; TERMINATE AFTER THREE INCORRECT ATTEMPTS]

QS2. Thank you for participating in our study. Your opinions are very important to us. If you don't know an answer to a question or if you don't have an opinion, please don't guess. Simply indicate this in your response by selecting the "Don't know / Unsure" option. There are no right or wrong answers.

Your responses will be kept anonymous and will be analyzed as part of a larger sample of responses. The results of this study will not be used to try to sell you anything.

If you wear glasses or corrective lenses when using a desktop computer, laptop computer, or tablet, please wear them throughout the survey.

Please do not use the "Back" button of your browser while taking the survey. When you are ready to get started, please select the "Continue" button.

QS3. What is your age? (*Please select only one option.*)

[FLIP ORDER PER RESPONDENT, AS IS AND REVERSE; KEEP "PREFER NOT TO ANSWER" LAST]

⦿ Under 18 **[TERMINATE]**
⦿ 18 - 34
⦿ 35 - 49
⦿ 50 - 64
⦿ 65 or above
⦿ Prefer not to answer **[TERMINATE]**

QS4. What is your gender? (*Please select only one option.*)

[RANDOMIZE; KEEP "OTHER" AND "PREFER NOT TO ANSWER" LAST]

⦿ Male
⦿ Female
⦿ Other: **[INSERT TEXT BOX]**
⦿ Prefer not to answer

QS5. In which state do you live? (*Please select only one option.*)

[INSERT DROP DOWN MENU OF ALL 50 STATES AND DC, PLUS "OTHER" AND "DON'T KNOW / UNSURE"]

[TERMINATE IF "OTHER" OR "DON'T KNOW / UNSURE" IS SELECTED]

QS6. Which of the following do you have any involvement in as part of your job responsibilities? *(Please select all that apply.)*

[RANDOMIZE; KEEP "OTHER" LAST]

- ❒ Hiring/HR
- ❒ IT/Tech
- ❒ Business intelligence/Data science
- ❒ Sales or account management
- ❒ Accounting/Finance
- ❒ Advertising or Marketing
- ❒ Website/Mobile App design/development
- ❒ Customer relationship management
- ❒ Data analysis/statistics
- ❒ Other (*specify):*

[TERMINATE IF "Advertising or Marketing" IS NOT SELECTED]

QS7. Which of the following best characterizes the type of company you work for? (*Please select only one option.*)

[RANDOMIZE; KEEP "OTHER" LAST]

- ⦿ **Advertiser/Marketer** – your company sells products or services and advertises/markets its products or services **[TERMINATE]**
- ⦿ **Creative Agency** – your company designs or produces marketing content and/or advises clients on their creative media/marketing strategies **[TERMINATE]**
- ⦿ **Media Agency** – your company advises clients on their media/marketing strategies and/or how to spend their advertising funds
- ⦿ **Full Service Agency** – your company handles both Creative and Media strategy and/or execution
- ⦿ **Other** (*please describe*)**: [INSERT TEXT BOX] [TERMINATE]**

QS8. **[IF FULL SERVICE AGENCY SELECTED IN QS7]** You indicated that you work for a Full Service Agency. Does your work primarily involve Creative strategy (i.e., designing or producing marketing content and/or advising clients on creative strategies) or Media strategy (i.e., advising clients on media/marketing strategy and/or how to spend advertising funds)? *(Please select only one option.)*

[RANDOMIZE ORDER; KEEP "NONE OF THE ABOVE" AND "DON'T KNOW / UNSURE" LAST]

- ⦿ Creative Strategy **[TERMINATE]**
- ⦿ Media Strategy
- ⦿ None of the above **[TERMINATE]**
- ⦿ Don't know / Unsure **[TERMINATE]**

QS9. Which of the following best characterizes your current job title/level? (*Select only one option.*)

[RANDOMIZE; KEEP "OTHER" LAST]

⦿ C-Level (CEO, CMO, COO, etc.)
⦿ Account Manager / Account Executive
⦿ Business Development Manager
⦿ Media Planner
⦿ Media Buyer
⦿ Project Manager
⦿ Social Media Manager
⦿ Editor / Writer
⦿ Analyst / Researcher
⦿ Strategist
⦿ Data Scientist / Data Analyst
⦿ Traffic Manager
⦿ Other (*please describe*): **[INSERT TEXT BOX]**

QS10. The following questions will ask you about your advertising decisions and practices. For these questions, please think about **the client you spend the most time on** and answer the question from the perspective of that client. If there are multiple clients you spend the most time on, please answer the following questions from the perspective of the most typical of those clients.

QS11. Which of the following, if any, best characterizes the market sector/industry of the client you spend the most time on? (*Please select only one option.*)

[DO NOT RANDOMIZE]

⦿ Advertising or Marketing
⦿ Apparel/Fashion
⦿ Automotive
⦿ B2B/Services for Businesses
⦿ Consumer Electronics
⦿ Education
⦿ Financial Products/Services for Consumers (including Fintech)
⦿ Food and Beverage
⦿ Government
⦿ Health and Beauty Products
⦿ Home Products/Appliances
⦿ Health Care or Medical Services
⦿ Media and Entertainment
⦿ Non-Profit
⦿ Pharmaceuticals and Remedies (Rx or OTC)
⦿ Restaurants
⦿ Retail (including Ecommerce)
⦿ Telecommunications
⦿ Travel and Hospitality

⦿ Other (*Please describe*): **[INSERT TEXT BOX]**

QS12. In the **last 12 months**, approximately how much did the client you spend the most time on spend on all advertising, including all digital types (e.g., display, video, audio, social) plus all nondigital types (e.g., TV types, print, OOH, etc.)? (*Please select only one option.*)

[FLIP ORDER PER RESPONDENT, AS IS AND REVERSE; KEEP "DON'T KNOW / UNSURE" LAST]

⦿ Less than $10,000
⦿ $10,000 to less than $50,000
⦿ $50,000 to less than $100,000
⦿ $100,000 to less than $250,000
⦿ $250,000 to less than $500,000
⦿ $500,000 to less than $1 million
⦿ $1 million to less than $3 million
⦿ $3 million to less than $7 million
⦿ $7 million to less than $15 million
⦿ $15 million to less than $30 million
⦿ $30 million to less than $50 million
⦿ $50 million to less than $100 million
⦿ $100 million to less than $250 million
⦿ $250 million to less than $500 million
⦿ $500 million or more
⦿ Don't know / Unsure

QS13. Please think about the total advertising budget for the client you spend the most time on. In the past year, what percentage of the total advertising budget for the client you spend the most time on was used for **digital (online) advertising**, as opposed to **offline advertising**? Please give your best estimate. *(Please enter a number from 0 to 100 for each type of advertising or select "Don't know / Unsure." Values must add up to 100%.)*

[FOR ERRORS, DISPLAY THE FOLLOWING ERROR MESSAGE: "Please enter a whole number between 0 and 100 for each advertising type, or select "Don't know / Unsure." Values must add up to 100**"][SHOW TOTAL AT BOTTOM]**

Percentage of budget spent on **digital (online) advertising** last year: [ ]
Percentage of budget spent on **offline advertising** last year: [ ]
⦿ Don't know / Unsure

[TERMINATE IF DIGITAL (ONLINE) = 0]

QS14. Which of the following types of **digital advertising**, if any, have you used in the past year for the client you spend the most time on? Please review the description of each advertising type **carefully**. *(Please select all that apply.)*

[RANDOMIZE ORDER; KEEP "OTHER" AND "DON'T KNOW / UNSURE" LAST]

	Advertising Type	**Description**
❐	Search	Digital ads placed on search engine result pages. Ads generally consist of a headline, description, and a link to the destination URL.
❐	Display	Digital ads made up of text, image, video, and/or other multimedia components that typically appear along the top or sides of a website, or sometimes in the middle of other content on a website. Examples of display ad formats include banner ads, animations, and interactive content. Display ads do not include ads placed on social media platforms.
❐	Email	Digital ads sent via email to current and potential customers.
❐	Digital Audio	Recorded advertisements that play between or during songs, podcasts, or other digital audio content.
❐	Social	Digital ads placed on social media platforms such as Facebook, Instagram, LinkedIn, Snapchat, and Twitter.
❐	App/In-App	Digital ads placed and displayed within mobile apps. Does not include ads placed on social media platforms.
❐	Digital Video	Includes video ads that appear before, during, or after digital content in a video player, such as YouTube.
❐	Connected TV	Includes digital advertising that appears on home screens of CTV devices and in-stream video ads that appear on CTVs from platforms like Hulu, Roku and YouTube. CTVs are TV sets connected to the internet through built-in internet capability or through another device such as a Blu-ray player, game console, set-top box (e.g., Apple TV, Google Chromecast, Roku), etc.
❐	eCommerce Platforms	Digital ads that appear on eCommerce platforms, such as Amazon.com or Instacart.
❐	Other *(specify and explain)*: **[INSERT TEXT BOX]**	
	⦿ Don't know / Unsure **[EXCLUSIVE]**	

[TERMINATE IF "DISPLAY" IS NOT SELECTED]

QS15. You indicated that you have used **display advertising** in the past year for the client you spend the most time on. Display ad inventory can be purchased through programmatic

transaction methods or through direct deals with publishers. Please review the below descriptions about these transaction methods.

Programmatic: Ads that are purchased programmatically are transacted and fulfilled using automation. In programmatic transactions, the price of each impression is typically determined in an auction conducted automatically before the impression is served.

Direct Deals: Ads that are purchased through a direct negotiation, or "direct deal," with the publisher. In direct deals, the price of the ad inventory is typically set through a one-to-one negotiation between the advertiser and the publisher rather than through an auction. "Direct deals" include programmatic direct deals, such as programmatic guaranteed deals and preferred deals.

Which of the following transaction methods have you used to purchase **display ad inventory** in the past year for the client you spend the most time on? *(Please select all that apply.)*

[RANDOMIZE ORDER; KEEP "NONE OF THE ABOVE" AND "DON'T KNOW / UNSURE" LAST]

❒ Programmatic
❒ Direct Deals
⦿ None of the above **[EXCLUSIVE]**
⦿ Don't know / Unsure **[EXCLUSIVE]**

[TERMINATE IF "PROGRAMMATIC" IS NOT SELECTED]

QS16. **[IF "SOCIAL" IS SELECTED IN QS14]** You indicated that you have used **social advertising** in the past year for the client you spend the most time on. Which of the following social media platforms, if any, have you used in the past year for the client you spend the most time on? (*Please select all that apply.*)

[RANDOMIZE ORDER; KEEP "OTHER," "NONE OF THE ABOVE", AND "DON'T KNOW / UNSURE" LAST]

❒ Facebook
❒ Instagram
❒ Pinterest
❒ Snapchat
❒ TikTok
❒ Twitter
❒ LinkedIn
❒ Reddit
❒ Tumblr
❒ FriendLinx
❒ Other social media platforms *(specify)*: **[INSERT TEXT BOX]**
⦿ None of the above **[EXCLUSIVE]**

- ⦿ Don't know / Unsure **[EXCLUSIVE]**

QS17. In the **last 12 months**, in which of the following ways have you personally been involved in **digital display** advertising efforts on behalf of the client you spend the most time on? (*Select all that apply.*)

[RANDOMIZE; KEEP "NONE OF THE ABOVE" AND "DON'T KNOW / UNSURE" LAST]

- ❒ I determine or advise the client regarding overall strategies and/or budgets for digital display.
- ❒ I determine or advise the client regarding which buying tools and/or demand-side platforms (DSPs) to use for digital display.
- ❒ I regularly use self-serve ad platforms to manage digital display campaigns for the client.
- ❒ I oversee a team/individuals that use(s) self-serve ad platforms to manage digital display campaigns for the client.
- ❒ I regularly set up audience/target parameters for programmatic digital display buying for the client.
- ❒ I oversee a team/individuals that set(s) up audience/target parameters for programmatic digital display buying for the client.
- ❒ I measure results of digital display campaigns for the client.
- ❒ I oversee a team/individuals that measure(s) results of digital display campaigns for the client.
- ⦿ None of the above **[EXCLUSIVE] [TERMINATE]**
- ⦿ Don't know / Unsure **[EXCLUSIVE] [TERMINATE]**

[TERMINATE IF NONE OF "I determine or advise the client regarding overall strategies and/or budgets for digital display**", "**I determine or advise the client regarding which buying tools and/or demand-side platforms (DSPs) to use for digital display**", "**I regularly use self-serve ad platforms to manage digital display campaigns for the client**", and "**I oversee a team/individuals that use(s) self-serve ad platforms to manage digital display campaigns for the client**" ARE SELECTED]**

QS18. This question is testing whether or not you're paying attention while taking this survey. Please select "Somewhat likely" below. (*Please select only one option.*)

[FLIP ORDER PER RESPONDENT, AS IS AND REVERSE; KEEP "DON'T KNOW / UNSURE" LAST]

- ⦿ Not at all likely **[TERMINATE]**
- ⦿ Not likely **[TERMINATE]**
- ⦿ Neither unlikely nor likely **[TERMINATE]**
- ⦿ Somewhat likely
- ⦿ Very likely **[TERMINATE]**
- ⦿ Don't know / Unsure **[TERMINATE]**

Main Questionnaire

Q1. You have been selected to answer additional questions about your advertising practices for **the client you spend the most time on**. Please continue to think about the client you spend the most time on and answer the question from the perspective of that client. If there are multiple clients you spend the most time on, please answer the following questions from the perspective of the most typical of those clients.

For each question, if you don't know or are unsure, please don't guess. Simply indicate this in your response by selecting the "Don't know / Unsure" option. There are no right or wrong answers.

Also, you should complete this survey without stopping in the middle. Please make sure not to consult anyone; use your browser's "Back" button; or open another browser while working on this survey.

Relative Roles of Agency vs. the Client

Q2. Which of the following best describes your involvement in each of these activities for the client you spend the most time on? *(Please select a value on the slider between 0 and 100 for each activity. If you do not have an answer, please select "Don't know / Unsure".)*

[SHOW SLIDER FOR EACH ROW FROM 0 TO 100, LABEL "I AM NOT INVOLVED IN THESE DECISIONS" 0 AND "I AM THE PRIMARY DECISION-MAKER" 100. INCLUDE OPTION FOR "DON'T KNOW / UNSURE"]

[RANDOMIZE ORDER OF ROWS]

Determining initial advertising budget
Allocating budget across different advertising types
Increasing/decreasing spending on a particular type of advertising
Increasing/decreasing spending on a particular ad campaign
Making changes to a campaign based on its performance
Deciding where to advertise
Deciding whether to purchase display ads programmatically or through direct deals with publishers
Measuring performance of display ad campaigns

Budget Allocation and Substitution

Q3. The following questions pertain to **digital advertising.**

Previously, you mentioned that the client you spend the most time on has used the following types of **digital advertising** in the past year. What is your best estimate of the share of the **digital advertising** budget of the client you spend the most time on that was used for each of these types of advertising in the past year? Specifically, please allocate 100% across the different types of digital advertising shown below based on the share of your client's total digital advertising budget spent on each type. The total should add up to 100%.

To review the advertising type descriptions, hover your mouse over each digital advertising type.

(Please enter a number from 0 to 100 in each cell, or select "Don't know / Unsure." Please make sure that numbers add up to 100.)

[SHOW ALL ANSWER OPTIONS SELECTED IN QS14 AND QS15 WITH TEXT BOX REQUIRING WHOLE NUMBER BETWEEN 0 AND 100. RANDOMIZE ORDER; KEEP "OTHER" AND "DON'T KNOW / UNSURE" LAST. SHOW RUNNING TOTAL AT THE BOTTOM OF THE PAGE WITH THE SUM OF THE NUMBERS ENTERED]

[DISPLAY DESCRIPTIONS FROM QS14 AND QS15 WHEN RESPONDENT HOVERS OVER TYPE OF ADVERTISING]

[THE SUM OF ALL NUMBERS MUST EQUAL 100. IF RESPONDENT CLICKS "NEXT" AND THE SUM OF THE NUMBERS IS NOT EQUAL TO 100, SHOW THE FOLLOWING ERROR MESSAGE: "Sorry, your answers do not add up to 100. Please try again.**"]**

[FOR ALL OTHER ERRORS, DISPLAY THE FOLLOWING ERROR MESSAGE: "Please specify a whole number in each cell, and do not leave any cell blank. Please enter 0 if you do not spend any portion of your advertising budget on a type of advertising.**"]**

Search:	
Programmatic Display:	
Direct Deals Display:	
Email:	
Digital Audio:	
Social:	
App/In-app:	
Digital Video:	

Connected TV:	[ ]
eCommerce Platforms:	[ ]
Other	[ ]
TOTAL	**[SHOW SUM OF NUMBERS ABOVE]**

⦿ Don't know / Unsure **[EXCLUSIVE]**

Q4. Please read carefully. Now suppose that, based on your analysis, the cost of **programmatic display advertising** has **recently increased by a small but significant amount, and will remain elevated for the foreseeable future**. Assume further that, based on similar analyses for other digital advertising types, the **costs of other digital advertising types** have **not** changed and are not expected to change.

So, for **the client you spend the most time on**, if the cost of programmatic display advertising increases (while the cost of other advertising types remains the same), will you or won't you divert some of your advertising spending for the coming year to other types of digital advertising?

[FLIP ORDER PER RESPONDENT, AS IS AND REVERSE; KEEP "DON'T KNOW / UNSURE" LAST]

- ⦿ Yes, I will divert some of my advertising spending for the coming year to other types of digital advertising.
- ⦿ No, I will **not** divert any of my advertising spending for the coming year to other types of digital advertising. **[SKIP TO Q7]**
- ⦿ Don't know / Unsure **[SKIP TO Q7]**

Q5. To which other types of digital advertising below, if any, would you divert your advertising spending for the coming year for **the client you spend the most time on**, as a result of the **increase in the cost of programmatic display advertising**?

To review the advertising type descriptions, hover your mouse over each digital advertising type.

(Please select all that apply.)

[DISPLAY DESCRIPTIONS FROM QS14 AND QS15 WHEN RESPONDENT HOVERS OVER TYPE OF ADVERTISING. RANDOMIZE ORDER; KEEP "OTHER," "NONE OF THE ABOVE," AND "DON'T KNOW / UNSURE" LAST]

- ❒ Search
- ❒ Direct Deals Display
- ❒ Email
- ❒ Digital Audio
- ❒ Social
- ❒ App/In-App

❒ Digital Video
❒ Connected TV
❒ eCommerce Platforms
❒ Other
⦿ None of the above **[EXCLUSIVE] [SKIP TO Q7]**
⦿ Don't know / Unsure **[EXCLUSIVE] [SKIP TO Q7]**

Q6. In your previous answer, you indicated that the increase in the cost of programmatic display advertising will lead you to divert some of your advertising spending to the types of digital advertising listed below.

Please use the sliders below to indicate, on a scale of **0** to **10**, the extent to which you would divert (that is, increase) advertising spending for the coming year for **the client you spend the most time on** to **each type of digital advertising** that you just indicated.

For each digital advertising type below, please select **0** if you expect to keep spending on that type of digital advertising for the coming year and **10** if you expect to substantially increase spending on that type of digital advertising.

To review the advertising type descriptions, hover your mouse over each digital advertising type.

[SHOW ANSWER OPTIONS SELECTED IN Q5. MATCH ORDER OF RESPONSES TO Q5. FOR EACH ADVERTISING TYPE, SHOW SLIDER FROM 0 TO 10, LABEL 0 "KEEP THE SAME" AND 10 "SUBSTANTIALLY INCREASE." INCLUDE OPTION FOR "DON'T KNOW / UNSURE".]

[DISPLAY DESCRIPTIONS FROM QS14 AND QS15 WHEN RESPONDENT HOVERS OVER TYPE OF ADVERTISING]

Search	**[INSERT SLIDER]**	⦿ Don't know / Unsure
Direct Deals Display	**[INSERT SLIDER]**	⦿ Don't know / Unsure
Email	**[INSERT SLIDER]**	⦿ Don't know / Unsure
Digital Audio	**[INSERT SLIDER]**	⦿ Don't know / Unsure
Social	**[INSERT SLIDER]**	⦿ Don't know / Unsure
App/In-app	**[INSERT SLIDER]**	⦿ Don't know / Unsure
Digital Video	**[INSERT SLIDER]**	⦿ Don't know / Unsure
Connected TV	**[INSERT SLIDER]**	⦿ Don't know / Unsure
eCommerce Platforms	**[INSERT SLIDER]**	⦿ Don't know / Unsure
Other	**[INSERT SLIDER]**	⦿ Don't know / Unsure

Use of Ad Buying Tools for Programmatic Display (Multihoming)

Q7. An ad buying tool is a programmatic advertising platform that allows advertisers and media buying agencies to bid automatically on display ad inventory from a wide range of publishers. Some ad buying tools can also be used to buy video and search ad inventory. Ad buying tools include demand side platforms, or "DSPs."

Which of the following ad buying tools, if any, have you used in the **past year** for **programmatic display advertising** for the client you spend the most time on? *(Please select all that apply.)*

[RANDOMIZE ORDER; KEEP "OTHER" AND "DON'T KNOW / UNSURE" LAST]

- ❒ Google Ads
- ❒ Google Display and Video 360 (DV360)
- ❒ illumin (formerly AcuityAds)
- ❒ Adelphic
- ❒ Adform
- ❒ Adobe Advertising Cloud
- ❒ Amazon DSP
- ❒ Amobee
- ❒ Basis by Centro
- ❒ Beeswax
- ❒ Criteo
- ❒ MediaMath DSP
- ❒ Outbrain
- ❒ Quantcast
- ❒ Simpli.fi
- ❒ StackAdapt
- ❒ Taboola
- ❒ The Trade Desk DSP
- ❒ Yahoo DSP (formerly Verizon Media DSP)
- ❒ Xandr Invest
- ❒ Zeta Global
- ❒ Quorexx
- ❒ Ad Step Technologies
- ❒ Other (*please specify*): **[TEXT BOX]**
- ⦿ Don't know / Unsure **[EXCLUSIVE] [SKIP TO Q16]**

[ADD FOLLOWING TEXT AS HOVER OVER FOR ALL INSTANCES OF "AD BUYING TOOL" IN FOLLOWING QUESTIONS: <u>An ad buying tool is a programmatic advertising platform that allows advertisers and media buying agencies to bid automatically on display ad inventory from a wide range of publishers</u>. Some ad buying tools can also be used to buy video and search ad inventory. Ad buying tools include demand side platforms, or "DSPs."**]**

Q8. **[IF MORE THAN ONE AD BUYING TOOL IS SELECTED IN Q7]** Why did you use more than one ad buying tool for **programmatic display advertising** in the past year for the client you spend the most time on? *(Please type in your response, or select "Don't know / Unsure".)*

[INSERT TEXT BOX]
[REQUIRE AT LEAST 4 CHARACTERS; IF ENTRY IS LESS THAN 4 CHARACTERS, SHOW ERROR "*Please be thorough in your response."***]**

- ⦿ Don't know / Unsure **[EXCLUSIVE]**

Q9. Do you expect to use the same number, more, or fewer ad buying tools for **programmatic display advertising** next year for the client you spend the most time on? *(Please select only one option.)*

[RANDOMIZE ORDER; KEEP "DON'T KNOW / UNSURE" LAST]
- ⦿ I expect to use **more** ad buying tools for programmatic display advertising next year for the client I spend the most time on.
- ⦿ I expect to use **fewer** ad buying tools for programmatic display advertising next year for the client I spend the most time on.
- ⦿ I expect to use the **same number** of ad buying tools for programmatic display advertising next year for the client I spend the most time on.
- ⦿ Don't know / Unsure

Q10. **[IF MORE OR FEWER SELECTED IN Q9]** You indicated that, compared to the past year, you expect to use **[PIPE IN BASED ON ANSWER IN Q9:** "**more**" or "**fewer**"**]** ad buying tools for programmatic display advertising next year for the client you spend the most time on. Why do you expect to use **[PIPE IN BASED ON ANSWER IN Q9:** "**more**" or "**fewer**"**]** ad buying tools for programmatic display advertising next year for the client you spend the most time on? *(Please type in your response or select "Don't know / Unsure".)*

[INSERT TEXT BOX]
[REQUIRE AT LEAST 4 CHARACTERS; IF ENTRY IS LESS THAN 4 CHARACTERS, SHOW ERROR "*Please be thorough in your response."***]**

- ⦿ Don't know / Unsure **[EXCLUSIVE]**

Q11. Which of the following factors, if any, do you consider when deciding to use a particular ad buying tool for **programmatic display advertising** for the client you spend the most time on? *(Please select all that apply.)*

[RANDOMIZE ORDER; KEEP "OTHER" AND "DON'T KNOW / UNSURE" LAST]
- ❒ Ad placement effectiveness
- ❒ Audience scale / Reach

- ❒ Ease of use / User interface
- ❒ Targeting criteria and capabilities
- ❒ Reporting features
- ❒ Forecasting tools
- ❒ Budget management tools
- ❒ API and integrations
- ❒ Troubleshooting capabilities
- ❒ Media optimization of placements during a campaign
- ❒ Brand safety / fraud protection
- ❒ Identity management
- ❒ Support
- ❒ Cost
- ❒ Other (*please specify*): **[TEXT BOX]**
- ⦿ Don't know / Unsure **[EXCLUSIVE]**

Q12. Have you stopped using any ad buying tool(s) for **programmatic display advertising** in the **past year** for the client you spend the most time on? *(Please select only one option.)*

[RANDOMIZE ORDER AS IS AND REVERSE; KEEP "DON'T KNOW / UNSURE" LAST]

- ⦿ Yes, I stopped using at least one ad buying tool in the past year for the client I spend the most time on.
- ⦿ No, I have **not** stopped using any ad buying tools in the past year for the client I spend the most time on.
- ⦿ Don't know / Unsure

Q13. **[IF YES IN Q12]** You indicated that you stopped using at least one ad buying tool in the **past year** for **programmatic display advertising** for the client you spend the most time on. What factors led you to stop using one or more ad buying tools for **programmatic display advertising** for the client you spend the most time on? *(Please type your response in the text box below, or select "Don't know / Unsure".)*

[INSERT TEXT BOX]
[REQUIRE AT LEAST 4 CHARACTERS; IF ENTRY IS LESS THAN 4 CHARACTERS, SHOW ERROR "*Please be thorough in your response."***]**

- ⦿ Don't know / Unsure **[EXCLUSIVE]**

Q14. Have you started using any ad buying tool(s) in the **past year** for **programmatic display advertising** for the client you spend the most time on? *(Please select only one option.)*

[RANDOMIZE ORDER AS IS AND REVERSE; KEEP "DON'T KNOW / UNSURE" LAST]

- ⦿ Yes, I started using at least one ad buying tool in the past year for the client I spend the most time on.
- ⦿ No, I have **not** started using any ad buying tools in the past year for the client I spend the most time on.
- ⦿ Don't know / Unsure

Q15. **[IF YES IN Q14]** You indicated that you started using at least one ad buying tool in the **past year** for **programmatic display advertising** for the client you spend the most time on. What factors led you to start using one or more ad buying tools for **programmatic display advertising** for the client you spend the most time on? *(Please type your response in the text box below, or select "Don't know / Unsure".)*

[INSERT TEXT BOX]
[REQUIRE AT LEAST 4 CHARACTERS; IF ENTRY IS LESS THAN 4 CHARACTERS, SHOW ERROR "*Please be thorough in your response."***]**

- ⦿ Don't know / Unsure **[EXCLUSIVE]**

Measuring Performance

Q16. **[ONLY INCLUDE ADVERTISING TYPES SELECTED IN QS13 AND QS15]** Which of the following metrics, if any, do you use to assess the performance of **programmatic display ads**, **direct deals display ads, social media ads,** and/or **digital video ads** for the client you spend the most time on?

To review the advertising type descriptions, hover your mouse over each digital advertising type.
(Please select all that apply in each column.)

[DISPLAY DESCRIPTIONS FROM QS14 AND QS15 WHEN RESPONDENT HOVERS OVER TYPE OF ADVERTISING]

[RANDOMIZE ORDER OF ROWS, KEEP "OTHER," "NONE OF THE ABOVE," AND "DON'T KNOW / UNSURE" LAST. RANDOMIZE ORDER OF COLUMNS]

Metric	Programmatic display ads	Direct deals display ads	Social media ads	Digital video ads
Impressions	❒	❒	❒	❒
Clicks	❒	❒	❒	❒
Conversions	❒	❒	❒	❒
Cost per impression (CPM)	❒	❒	❒	❒
Cost per click (CPC)	❒	❒	❒	❒
Cost per action (CPA)	❒	❒	❒	❒
Return on Ad Spend (ROAS)	❒	❒	❒	❒
Return on Investment (ROI)	❒	❒	❒	❒

Click through rate (CTR)	❐	❐	❐	❐
Other (*please specify*): **[TEXT BOX]**	❐	❐	❐	❐
None of the above **[EXCLUSIVE]**	⦿	⦿	⦿	⦿
Don't know / Unsure **[EXCLUSIVE]**	⦿	⦿	⦿	⦿

Q17. **[ONLY IF MORE THAN ONE METRIC FOR PROGRAMMATIC DISPLAY ADS ARE SELECTED IN Q16]** You indicated that you use the following metrics to assess the performance of **programmatic display ads** for the client you spend the most time on. Please rank these metrics in terms of **how important they are to accurately assessing the performance of programmatic display ads**, with 1 being the most important and **[NUMBER OF MEASURES SELECTED IN Q16]** being the least important. *(Please rank the following metrics, or select "Don't know / Unsure".)*

[HAVE RESPONDENTS ASSIGN A RANK FROM 1 TO THE NUMBER OF RESPONSES SELECTED IN Q16 FOR EACH PERFORMANCE METRIC]

⦿ Don't know / Unsure **[EXCLUSIVE]**

Q18. How often, if at all, do you measure or assess the performance of the **programmatic display advertising** for the client you spend the most time on? *(Please select only one option.)*

[RANDOMIZE ORDER AS IS AND REVERSE; KEEP "DON'T KNOW / UNSURE" LAST]

⦿ Daily
⦿ Weekly
⦿ Monthly
⦿ Quarterly
⦿ Annually
⦿ Don't know / Unsure

Q19. In the past year, have you run any experiments or test & learn initiatives to assess the performance of the **programmatic display ads** for the client you spend the most time on? *(Please select only one option.)*
[RANDOMIZE ORDER AS IS AND REVERSE; KEEP "DON'T KNOW / UNSURE" LAST]

⦿ Yes
⦿ No
⦿ Don't know / Unsure

Q20. **[IF YES IN Q19]** Which of the following types of experiments or test & learn initiatives, if any, have you run in the past year to assess the performance of the **programmatic display ads** for the client you spend the most time on?

I have run experiments and/or test & learn initiatives testing… *(Please select all that apply.)*

[RANDOMIZE ORDER; KEEP “OTHER” AND “DON’T KNOW / UNSURE” LAST]

- ❒ Creatives
- ❒ Bid strategies
- ❒ Audiences
- ❒ Publishers
- ❒ Ad buying tool performance
- ❒ ROI/ROAS
- ❒ Other (*please specify*): **[TEXT BOX]**
- ⦿ Don’t know / Unsure **[EXCLUSIVE]**

Follow Up Question

QF1. This survey is being conducted by consultants that have been retained on behalf of Google in connection with pending antitrust lawsuits in which the plaintiffs allege that Google engaged in anticompetitive conduct related to digital advertising.

If you are willing to participate in this survey, please click “Include my responses” below. As a reminder, your responses will be kept anonymous and will be analyzed as part of a larger sample of responses.

If you do not want to participate in this survey, please click “Exclude my responses” below.

[RANDOMIZE ORDER]

- ⦿ Include my responses
- ⦿ Exclude my responses

APPENDIX H.2
AGENCY SURVEY SCREENSHOTS

INTRODUCTION AND SCREENING

0%

AD PROS™
ADVERTISER PERCEPTIONS

Please enter the code exactly as it appears in the box below, and then click "Continue" to continue.

FKT98L

Continue »

3%

AD PROS™
ADVERTISER PERCEPTIONS

Thank you for participating in our study. Your opinions are very important to us. If you don't know an answer to a question or if you don't have an opinion, please don't guess. Simply indicate this in your response by selecting the "Don't know/Unsure" option. There are no right or wrong answers.

Your responses will be kept anonymous and will be analyzed as part of a larger sample of responses. The results of this study will not be used to try to sell you anything.

If you wear glasses or corrective lenses when using a desktop computer, laptop computer, or tablet, please wear them throughout the survey.

Please do not use the "Back" button of your browser while taking the survey. When you are ready to get started, please select the "Continue" button.

Continue »

6%

AD PROS™
ADVERTISER PERCEPTIONS

What is your age?

(Please select only one option.)

- Under 18
- 18 – 34
- 35 – 49
- 50 – 64
- 65 or above
- Prefer not to answer

Continue »

9%

AD PROS™
ADVERTISER PERCEPTIONS

What is your gender?

(Please select only one option.)

- Female
- Male
- Other:
- Prefer not to answer

Continue »

12%

AD PROS™
ADVERTISER PERCEPTIONS

In which state do you live?

(Please select only one option.)

Select one...

Continue »

15%

AD PROS™
ADVERTISER PERCEPTIONS

Which of the following do you have any involvement in as part of your job responsibilities?

(Please select all that apply.)

- [ ] Data analysis/statistics
- [ ] Accounting/Finance
- [ ] Customer relationship management
- [ ] Advertising or Marketing
- [ ] Website/Mobile App design/development
- [ ] Hiring/HR
- [ ] IT/Tech
- [ ] Sales or account management
- [ ] Business intelligence/Data science
- [ ] Other *(specify)*: ______

Continue »

18%

AD PROS™
ADVERTISER PERCEPTIONS

Which of the following best characterizes the type of company you work for?

(Please select only one option.)

- ◯ **Full Service Agency** – your company handles both Creative and Media strategy and/or execution
- ◯ **Media Agency** – your company advises clients on their media/marketing strategies and/or how to spend their advertising funds
- ◯ **Creative Agency** – your company designs or produces marketing content and/or advises clients on their creative media/marketing strategies
- ◯ **Advertiser/Marketer** – your company sells products or services and advertises/markets its products or services
- ◯ **Other** *(please describe)*: ______

Continue »

22%

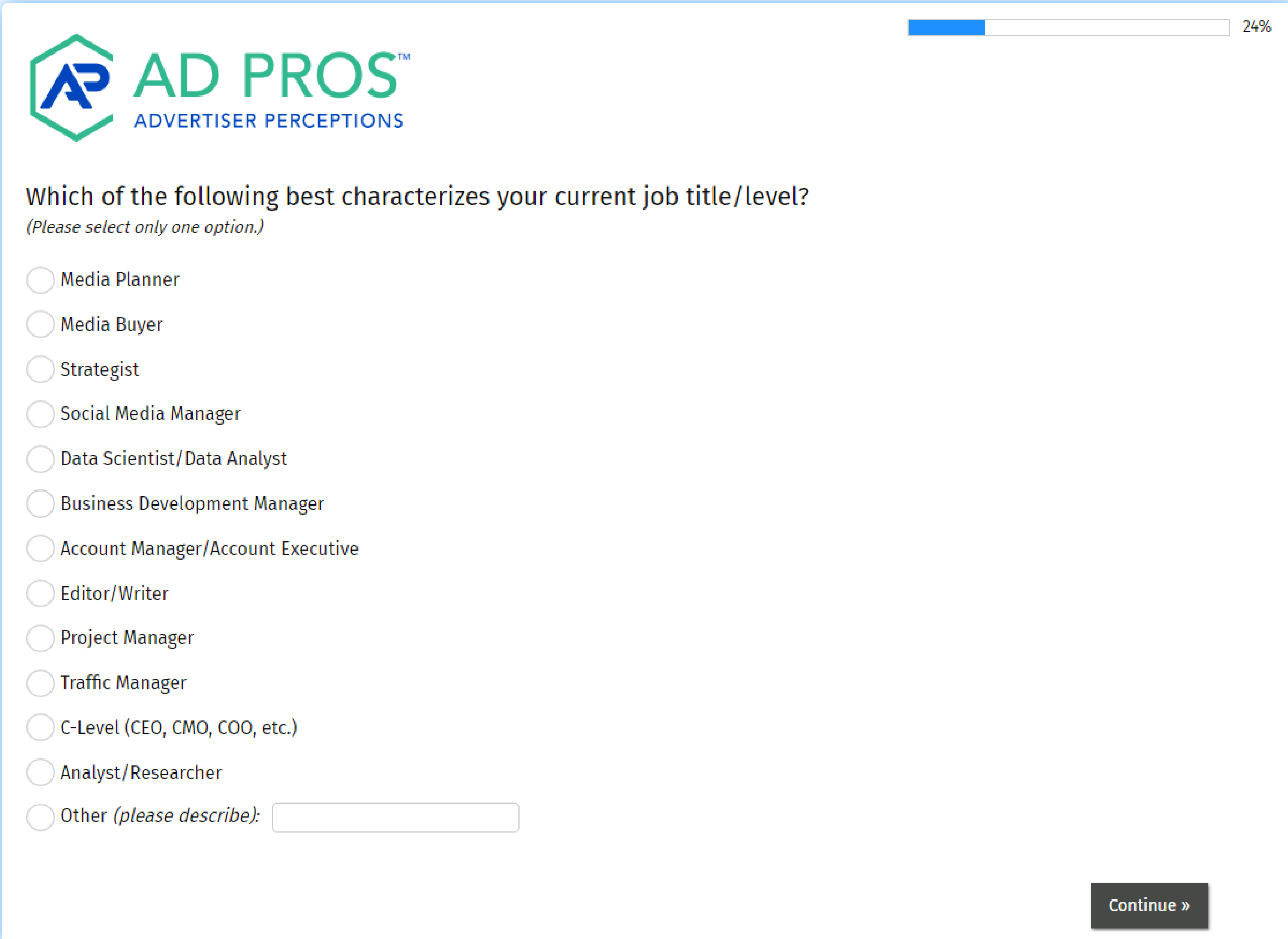
AD PROS™
ADVERTISER PERCEPTIONS

You indicated that you work for a Full Service Agency. Does your work primarily involve Creative strategy (i.e., designing or producing marketing content and/or advising clients on creative strategies) or Media strategy (i.e., advising clients on media/marketing strategy and/or how to spend advertising funds)?

(Please select only one option.)

- ○ Creative Strategy
- ○ Media Strategy
- ○ None of the above
- ○ Don't know/Unsure

Continue »


24%
AD PROS™
ADVERTISER PERCEPTIONS
Which of the following best characterizes your current job title/level?
(Please select only one option.)
Media Planner
Media Buyer
Strategist
Social Media Manager
Data Scientist/Data Analyst
Business Development Manager
Account Manager/Account Executive
Editor/Writer
Project Manager
Traffic Manager
C-Level (CEO, CMO, COO, etc.)
Analyst/Researcher
Other (please describe):
Continue »

26%

AD PROS™
ADVERTISER PERCEPTIONS

The following questions will ask you about your advertising decisions and practices. For these questions, please think about **the client you spend the most time on** and answer the question from the perspective of that client. If there are multiple clients you spend the most time on, please answer the following questions from the perspective of the most typical of those clients.

Continue »

29%

AD PROS™
ADVERTISER PERCEPTIONS

Which of the following, if any, best characterizes the market sector/industry of the client you spend the most time on?
(Please select only one option.)

- Advertising or Marketing
- Apparel/Fashion
- Automotive
- B2B/Services for Businesses
- Consumer Electronics
- Education
- Financial Products/Services for Consumers (including Fintech)
- Food and Beverage
- Government
- Health and Beauty Products
- Home Products/Appliances
- Health Care or Medical Services
- Media and Entertainment
- Non-Profit
- Pharmaceuticals and Remedies (Rx or OTC)
- Restaurants
- Retail (including Ecommerce)
- Telecommunications
- Travel and Hospitality
- Other *(Please describe)*:

Continue »

33%

AD PROS™
ADVERTISER PERCEPTIONS

In the **last 12 months**, how much did the client you spend the most time on spend on all advertising, including all digital types (e.g., display, video, audio, social) plus all nondigital types (e.g., TV types, print, OOH, etc.)?

(Please select only one option.)

- Less than $10,000
- $10,000 to less than $50,000
- $50,000 to less than $100,000
- $100,000 to less than $250,000
- $250,000 to less than $500,000
- $500,000 to less than $1 million
- $1 million to less than $3 million
- $3 million to less than $7 million
- $7 million to less than $15 million
- $15 million to less than $30 million
- $30 million to less than $50 million
- $50 million to less than $100 million
- $100 million to less than $250 million
- $250 million to less than $500 million
- $500 million or more
- Don't know/Unsure

Continue »

36%

AD PROS™
ADVERTISER PERCEPTIONS

Please think about the total advertising budget for the client you spend the most time on. In the past year, what percentage of the total advertising budget for the client you spend the most time on was used for **digital (online) advertising**, as opposed to **offline advertising**? Please give your best estimate.

(Please enter a number from 0 to 100 for each type of advertising or select "Don't know/Unsure." Values must add up to 100%.)

Percentage of budget spent on **digital (online) advertising** last year:	%
Percentage of budget spent on **offline advertising** last year:	%
Don't know/Unsure	
	Total: 0 %

Continue »

39%

AD PROS™
ADVERTISER PERCEPTIONS

Which of the following types of **digital advertising**, if any, have you used in the past year for the client you spend the most time on? Please review the description of each advertising type **carefully**.
(Please select all that apply.)

- [ ] **Digital Audio** (Recorded advertisements that play between or during songs, podcasts, or other digital audio content.)
- [ ] **Connected TV** (Includes digital advertising that appears on home screens of CTV devices and in-stream video ads that appear on CTVs from platforms like Hulu, Roku and YouTube. CTVs are TV sets connected to the internet through built-in internet capability or through another device such as a Blu-ray player, game console, set-top box (e.g., Apple TV, Google Chromecast, Roku), etc.)
- [ ] **eCommerce Platforms** (Digital ads that appear on eCommerce platforms, such as Amazon.com or Instacart.)
- [ ] **Display** (Digital ads made up of text, image, video, and/or other multimedia components that typically appear along the top or sides of a website, or sometimes in the middle of other content on a website. Examples of display ad formats include banner ads, animations, and interactive content. Display ads do not include ads placed on social media platforms.)
- [ ] **Search** (Digital ads placed on search engine result pages. Ads generally consist of a headline, description, and a link to the destination URL.)
- [ ] **Email** (Digital ads sent via email to current and potential customers.)
- [ ] **Social** (Digital ads placed on social media platforms such as Facebook, Instagram, LinkedIn, Snapchat, and Twitter.)
- [ ] **App/In-App** (Digital ads placed and displayed within mobile apps. Does not include ads placed on social media platforms.)
- [ ] **Digital Video** (Includes video ads that appear before, during, or after digital content in a video player, such as YouTube.)
- [ ] Other *(specify and explain)*: ______
- [ ] Don't know/Unsure

Continue »

42%

AD PROS™
ADVERTISER PERCEPTIONS

You indicated that you have used **display advertising** in the past year for the client you spend the most time on. Display ad inventory can be purchased through programmatic transaction methods or through direct deals with publishers. Please review the below descriptions about these transaction methods.

Programmatic: Ads that are purchased programmatically are transacted and fulfilled using automation. In programmatic transactions, the price of each impression is typically determined in an auction conducted automatically before the impression is served.

Direct Deals: Ads that are purchased through a direct negotiation, or "direct deal," with the publisher. In direct deals, the price of the ad inventory is typically set through a one-to-one negotiation between the advertiser and the publisher rather than through an auction. "Direct deals" include programmatic direct deals, such as programmatic guaranteed deals and preferred deals.

Which of the following transaction methods have you used to purchase **display ad inventory** in the past year for the client you spend the most time on?
(Please select all that apply.)

- [ ] Direct Deals
- [ ] Programmatic
- [ ] None of the above
- [ ] Don't know/Unsure

Continue »

45%

AD PROS™
ADVERTISER PERCEPTIONS

You indicated that you have used **social advertising** in the past year for the client you spend the most time on. Which of the following social media platforms, if any, have you used in the past year for the client you spend the most time on?

(Please select all that apply.)

- [ ] Facebook
- [ ] Pinterest
- [ ] Snapchat
- [ ] Tumblr
- [ ] TikTok
- [ ] Twitter
- [ ] Reddit
- [ ] Instagram
- [ ] LinkedIn
- [ ] FriendLinx
- [ ] Other social media platforms *(specify)*:
- [ ] None of the above
- [ ] Don't know/Unsure

Continue »

48%

AD PROS™
ADVERTISER PERCEPTIONS

In the **last 12 months**, in which of the following ways have you personally been involved in **digital display** advertising efforts on behalf of the client you spend the most time on?
(Select all that apply.)

- [ ] I determine or advise the client regarding overall strategies and/or budgets for digital display.
- [ ] I regularly use self-serve ad platforms to manage digital display campaigns for the client.
- [ ] I oversee a team/individuals that measure(s) results of digital display campaigns for the client.
- [ ] I oversee a team/individuals that set(s) up audience/target parameters for programmatic digital display buying for the client.
- [ ] I regularly set up audience/target parameters for programmatic digital display buying for the client.
- [ ] I determine or advise the client regarding which buying tools and/or demand-side platforms (DSPs) to use for digital display.
- [ ] I measure results of digital display campaigns for the client.
- [ ] I oversee a team/individuals that use(s) self-serve ad platforms to manage digital display campaigns for the client.
- [ ] None of the above
- [ ] Don't know/Unsure

Continue »

49%

AD PROS™
ADVERTISER PERCEPTIONS

This question is testing whether or not you're paying attention while taking this survey. Please select "Somewhat likely" below.

(Please select only one option.)

- Not at all likely
- Not likely
- Neither unlikely nor likely
- Somewhat likely
- Very likely
- Don't know/Unsure

Continue »

MAIN QUESTIONNAIRE

52%

AD PROS™
ADVERTISER PERCEPTIONS

You have been selected to answer additional questions about your advertising practices for **the client you spend the most time on**. Please continue to think about the client you spend the most time on and answer the questions from the perspective of that client. If there are multiple clients you spend the most time on, please answer the following questions from the perspective of the most typical of those clients.

For each question, if you don't know or are unsure, please don't guess. Simply indicate this in your response by selecting the "Don't know/Unsure" option. There are no right or wrong answers.

Also, you should complete this survey without stopping in the middle. Please make sure not to consult anyone; use your browser's "Back" button; or open another browser while working on this survey.

Continue »

55%

AD PROS™
ADVERTISER PERCEPTIONS

Which of the following best describes your involvement in each of these activities for the client you spend the most time on?

(Please select a value on the slider between 0 and 100 for each activity. If you do not have an answer, please select "Don't know/Unsure".)

Deciding where to advertise

I am not involved in these decisions = 0 | I am the primary decision-maker = 100

☐ *Don't know/Unsure*

Deciding whether to purchase display ads programmatically or through direct deals with publishers

I am not involved in these decisions = 0 | I am the primary decision-maker = 100

☐ *Don't know/Unsure*

Making changes to a campaign based on its performance

I am not involved in these decisions = 0 | I am the primary decision-maker = 100

☐ *Don't know/Unsure*

Measuring performance of display ad campaigns

I am not involved in these decisions = 0 | I am the primary decision-maker = 100

☐ *Don't know/Unsure*

Increasing/decreasing spending on a particular type of advertising

I am not involved in these decisions = 0

I am the primary decision-maker = 100

Don't know/Unsure

Determining initial advertising budget

I am not involved in these decisions = 0

I am the primary decision-maker = 100

Don't know/Unsure

Allocating budget across different advertising types

I am not involved in these decisions = 0

I am the primary decision-maker = 100

Don't know/Unsure

Increasing/decreasing spending on a particular ad campaign

I am not involved in these decisions = 0

I am the primary decision-maker = 100

Don't know/Unsure

Continue »

59%

AD PROS™
ADVERTISER PERCEPTIONS

The following questions pertain to **digital advertising**.

Previously, you mentioned that the client you spend the most time on has used the following types of **digital advertising** in the past year. What is your best estimate of the share of the **digital advertising** budget of the client you spend the most time on that was used for each of these types of advertising in the past year? Specifically, please allocate 100% across the different types of digital advertising shown below based on the share of your client's total digital advertising budget spent on each type. The total should add up to 100%.

To review the advertising type descriptions, hover your mouse over each digital advertising type.

(Please enter a number from 0 to 100 in each cell, or select "Don't know/Unsure." Please make sure that numbers add up to 100.)

Programmatic Display	%
Direct Deals Display	%
Search	%
Digital Video	%
Social	%
Don't know/Unsure	
	Total: 0 %

Continue »

62%

AD PROS™ ADVERTISER PERCEPTIONS

Please read carefully. Now suppose that, based on your analysis, the cost of **programmatic display advertising** has **recently increased by a small but significant amount, and will remain elevated for the foreseeable future**. Assume further that, based on similar analyses for other digital advertising types, the **costs of other digital advertising types** have not changed and are not expected to change.

So, for **the client you spend the most time on**, if the cost of programmatic display advertising increases (while the cost of other advertising types remains the same), will you or won't you divert some of your advertising spending for the coming year to other types of digital advertising?

- Yes, I will divert some of my advertising spending for the coming year to other types of digital advertising.
- No, I will **not** divert any of my advertising spending for the coming year to other types of digital advertising.
- Don't know/Unsure

Continue »

65%

AD PROS™
ADVERTISER PERCEPTIONS

To which other types of digital advertising below, if any, would you divert your advertising spending for the coming year for **the client you spend the most time on**, as a result of the **increase in the cost of programmatic display advertising**?

To review the advertising type descriptions, hover your mouse over each digital advertising type.
(Please select all that apply.)

- ☐ Digital Audio
- ☐ eCommerce Platforms
- ☐ Search
- ☐ Direct Deals Display
- ☐ App/In-App
- ☐ Digital Video
- ☐ Social
- ☐ Email
- ☐ Connected TV
- ☐ Other
- ☐ None of the above
- ☐ Don't know/Unsure

Continue »

66%

AD PROS™
ADVERTISER PERCEPTIONS

In your previous answer, you indicated that the increase in the cost of programmatic display advertising will lead you to divert some of your advertising spending to the types of digital advertising listed below.

Please use the sliders below to indicate, on a scale of **0** to **10**, the extent to which you would divert (that is, increase) advertising spending for the coming year for **the client you spend the most time on** to **each type of digital advertising** that you just indicated.

For each digital advertising type below, please select **0** if you expect to keep spending on that type of digital advertising for the coming year and **10** if you expect to substantially increase spending on that type of digital advertising.

To review the advertising type descriptions, hover your mouse over each digital advertising type.

Search

0 Keep the same | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 Substantially increase

☐ *Don't know/Unsure*

Direct Deals Display

0 Keep the same | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 Substantially increase

☐ *Don't know/Unsure*

Digital Video

0 Keep the same | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 Substantially increase

☐ *Don't know/Unsure*

Social

0 Keep the same | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 Substantially increase

☐ *Don't know/Unsure*

Continue »

68%

AD PROS™
ADVERTISER PERCEPTIONS

An ad buying tool is a programmatic advertising platform that allows advertisers and media buying agencies to bid automatically on display ad inventory from a wide range of publishers. Some ad buying tools can also be used to buy video and search ad inventory. Ad buying tools include demand side platforms, or "DSPs."

Which of the following ad buying tools, if any, have you used in the **past year** for **programmatic display advertising** for the client you spend the most time on?
(Please select all that apply.)

MediaMath DSP	☐	Criteo	☐
The Trade Desk DSP	☐	Xandr Invest	☐
Basis by Centro	☐	Beeswax	☐
Adobe Advertising Cloud	☐	Yahoo DSP (formerly Verizon Media DSP)	☐
Outbrain	☐	Simpli.fi	☐
Adform	☐	Amobee	☐
Quorexx	☐	Zeta Global	☐
Taboola	☐	Amazon DSP	☐
Ad Step Technologies	☐	Adelphic	☐
Google Display and Video 360 (DV360)	☐	Quantcast	☐
Google Ads	☐	Other *(please specify)*:	☐
illumin (formerly AcuityAds)	☐	Don't know/Unsure	☐
StackAdapt	☐		

Continue »

70%

AD PROS™
ADVERTISER PERCEPTIONS

Why did you use more than one ad buying tool for **programmatic display advertising** in the past year for the client you spend the most time on?

(Please type in your response, or select "Don't know/Unsure".)

☐ Don't know/Unsure

Continue »

70%

AD PROS™
ADVERTISER PERCEPTIONS

Do you expect to use the same number, more, or fewer ad buying tools for **programmatic display advertising** next year for the client you spend the most time on?

(Please select only one option.)

- I expect to use the **same number** of ad buying tools for programmatic display advertising next year for the client I spend the most time on.
- I expect to use **more** ad buying tools for programmatic display advertising next year for the client I spend the most time on.
- I expect to use **fewer** ad buying tools for programmatic display advertising next year for the client I spend the most time on.
- Don't know/Unsure

Continue »

73%

AD PROS™
ADVERTISER PERCEPTIONS

You indicated that, compared to the past year, you expect to use **more** ad buying tools for programmatic display advertising next year for the client you spend the most time on. Why do you expect to use **more** ad buying tools for **programmatic display advertising** next year for the client you spend the most time on?

(Please type in your response or select "Don't know/Unsure".)

☐ Don't know/Unsure

Continue »

75%

AD PROS™
ADVERTISER PERCEPTIONS

Which of the following factors, if any, do you consider when deciding to use a particular ad buying tool for **programmatic display advertising** for the client you spend the most time on?
(Please select all that apply.)

- [ ] Media optimization of placements during a campaign
- [ ] Brand safety/fraud protection
- [ ] Forecasting tools
- [ ] Cost
- [ ] Audience scale/Reach
- [ ] Ad placement effectiveness
- [ ] API and integrations
- [ ] Support
- [ ] Identity management
- [ ] Reporting features
- [ ] Ease of use/User interface
- [ ] Budget management tools
- [ ] Targeting criteria and capabilities
- [ ] Troubleshooting capabilities
- [ ] Other *(please specify)*:
- [ ] Don't know/Unsure

Continue »

77%

AD PROS™
ADVERTISER PERCEPTIONS

Have you stopped using any ad buying tool(s) for **programmatic display advertising** in the **past year** for the client you spend the most time on?

(Please select only one option.)

- Yes, I stopped using at least one ad buying tool in the past year for the client I spend the most time on.
- No, I have **not** stopped using any ad buying tools in the past year for the client I spend the most time on.
- Don't know/Unsure

Continue »

80%

AD PROS™
ADVERTISER PERCEPTIONS

You indicated that you stopped using at least one ad buying tool in the **past year** for **programmatic display advertising** for the client you spend the most time on. What factors led you to stop using one or more ad buying tools for **programmatic display advertising** for the client you spend the most time on?

(Please type your response in the text box below, or select "Don't know/Unsure".)

☐ Don't know/Unsure

Continue »

82%

AD PROS™
ADVERTISER PERCEPTIONS

Have you started using any ad buying tool(s) in the **past year** for **programmatic display advertising** for the client you spend the most time on?

(Please select only one option.)

- No, I have **not** started using any ad buying tools in the past year for the client I spend the most time on.
- Yes, I started using at least one ad buying tool in the past year for the client I spend the most time on.
- Don't know/Unsure

Continue »

84%

AD PROS™
ADVERTISER PERCEPTIONS

You indicated that you started using at least one ad buying tool in the **past year** for **programmatic display advertising** for the client you spend the most time on. What factors led you to start using one or more ad buying tools for **programmatic display advertising** for the client you spend the most time on?

(Please type your response in the text box below, or select "Don't know/Unsure".)

☐ Don't know/Unsure

Continue »

85%

AD PROS™
ADVERTISER PERCEPTIONS

Which of the following metrics, if any, do you use to assess the performance of programmatic display ads, direct deals display ads, social media ads and/or digital video ads for the client you spend the most time on?

To review the advertising type descriptions, hover your mouse over each digital advertising type.
(Please select all that apply in each column.)

	Programmatic display ads	Digital video ads	Direct deals display ads	Social media ads
Cost per impression (CPM)	☐	☐	☐	☐
Clicks	☐	☐	☐	☐
Cost per click (CPC)	☐	☐	☐	☐
Return on Investment (ROI)	☐	☐	☐	☐
Return on Ad Spend (ROAS)	☐	☐	☐	☐
Impressions	☐	☐	☐	☐
Cost per action (CPA)	☐	☐	☐	☐
Conversions	☐	☐	☐	☐
Click through rate (CTR)	☐	☐	☐	☐
Other *(please specify)*:	☐			
Other *(please specify)*:			☐	
Other *(please specify)*:				☐
Other *(please specify)*:		☐		
None of the above	☐	☐	☐	☐
Don't know/Unsure	☐	☐	☐	☐

Continue »

88%

AD PROS™
ADVERTISER PERCEPTIONS

You indicated that you use the following metrics to assess the performance of **programmatic display ads** for the client you spend the most time on. Please rank these metrics in terms of **how important they are to accurately assessing the performance of programmatic display ads**, with 1 being the most important and 2 being the least important.

(Please rank the following metrics, or select "Don't know/Unsure".)

Cost per impression (CPM)

Cost per click (CPC)

Don't know/Unsure

Rank 1

Rank 2

Continue »

HIGHLY CONFIDENTIAL – SUBJECT TO PROTECTIVE ORDER

90%

AD PROS™
ADVERTISER PERCEPTIONS

How often, if at all, do you measure or assess the performance of the **programmatic display advertising** for the client you spend the most time on?

(Please select only one option.)

- Daily
- Weekly
- Monthly
- Quarterly
- Annually
- Don't know/Unsure

Continue »

92%

AD PROS™
ADVERTISER PERCEPTIONS

In the past year, have you run any experiments or test & learn initiatives to assess the performance of the **programmatic display ads** for the client you spend the most time on?

(Please select only one option.)

- Yes
- No
- Don't know/Unsure

Continue »

95%

AD PROS™
ADVERTISER PERCEPTIONS

Which of the following types of experiments or test & learn initiatives, if any, have you run in the past year to assess the performance of the **programmatic display ads** for the client you spend the most time on?

I have run experiments and/or test & learn initiatives testing...
(Please select all that apply.)

- ☐ ROI/ROAS
- ☐ Creatives
- ☐ Audiences
- ☐ Ad buying tool performance
- ☐ Bid strategies
- ☐ Publishers
- ☐ Other *(please specify)*:
- ☐ Don't know/Unsure

Continue »

FOLLOW UP QUESTION

96%

AD PROS™
ADVERTISER PERCEPTIONS

This survey is being conducted by consultants that have been retained on behalf of Google in connection with pending antitrust lawsuits in which the plaintiffs allege that Google engaged in anticompetitive conduct related to digital advertising.

If you are willing to participate in this survey, please click "Include my responses" below. As a reminder, your responses will be kept anonymous and will be analyzed as part of a larger sample of responses.

If you do not want to participate in this survey, please click "Exclude my responses" below.

- Include my responses
- Exclude my responses

Continue »

AD PROS™
ADVERTISER PERCEPTIONS

Thank you for taking our survey. Your efforts are greatly appreciated!

APPENDIX H.3
AGENCY SURVEY
RAW DATA

PRODUCED AS NATIVE

APPENDIX I
NO CONTACT LIST

APPENDIX I

NO CONTACT LIST
AS OF AUGUST 15, 2023

Entity	Type of Entity
33 Across	Ad Tech Provider
Accenture Federal Services	Ad Agency
AccuWeather	Publisher
AdButler & Sparklit Networks, Inc.	Ad Tech Provider
AdClickMedia	Ad Tech Provider
Adform	Ad Tech Provider
AdGlare	Ad Tech Provider
Adning	Ad Tech Provider
Adobe Inc.	Ad Tech Provider
AdRecover	Ad Tech Provider
Adsmovil	Ad Agency
Adsterra	Ad Tech Provider
Advance Publications, Inc.	Publisher
Advertising Council, Inc., The (AdCouncil)	Ad Agency
Aim Media Indiana Operating, LLC	Publisher
AIM Media Midwest Operating, LLC	Publisher
AIM Media Texas Operating, LLC	Publisher
Alaska Department of Labor	State Agency
Alaska Department Of Revenue	State Agency
Alaska Office Of Veterans Affairs	State Agency
Alaska, State of	State / Territory
Alden Global Capital	Publisher
Alhurra, Inc.	Advertiser
Ally Financial	Advertiser
Altice	Publisher
Amazon (including Twitch (ad server))	Ad Tech Provider
American Express	Advertiser
Amtrak (The National Railroad Passenger Corporation)	Federal Agency
ANGI	Advertiser
Anheuser Busch Inbev	Advertiser
Apco	Ad Agency
Apollo (including Verizon Media/Yahoo, Oath, Adapt.tv, Brightroll, Nexage, and Michaels (Publisher))	Ad Tech Provider
Appen Media Group, Inc.	Publisher

APPENDIX I

NO CONTACT LIST
AS OF AUGUST 15, 2023

Entity	Type of Entity
Apple (including AppleNews (publisher))	Ad Tech Provider
AppLovin Corporation / MoPub	Ad Tech Provider
Aptive Resources, LLC	Ad Agency
Arizona Game & Fish Department	State Agency
Arizona State University	State Agency
Arizona, State of	State / Territory
Arkansas Department of Parks, Heritage and Tourism	State Agency
Arkansas Division Of Higher Education	State Agency
Arkansas, State of	State / Territory
Arrieta, Nicholas	Advertiser
Associated Newspapers Ltd.	Publisher
Associated Press, The	Publisher
Astarita, Mark J.	Advertiser
AT&T and subsidiaries (Xandr [f/k/a AppNexus], Warner Bros.)	Ad Tech Provider
Autodesk	Advertiser
Bed, Bath, & Beyond	Publisher
Berkshire Hathaway	Advertiser
Best Buy Co., Inc.	Advertiser
Bidvertiser	Ad Tech Provider
Big Lens	Ad Agency
Bigler, Jason	Ad Tech Provider
Billow Marketing	Ad Agency
Blaine Warren	Ad Agency
Blast Analytics & Marketing	GMP-certified partner
Bloomberg L.P.	Publisher
Boeing	Advertiser
Boland, Brian	Ad Tech Provider
Borgman, Christine L.	Other
Bounteous	GMP-certified partner
Brightcom	Ad Tech Provider
Broadstreet	Ad Tech Provider
Brown County Publishing Company Inc	Publisher
Browne, Simone	Other
Brunet Garcia Advertising Inc.	Ad Agency

APPENDIX I

NO CONTACT LIST
AS OF AUGUST 15, 2023

Entity	Type of Entity
Bully Pulpit Interactive	Ad Agency
BuySellAds	Ad Tech Provider
Buzzfeed, Inc.	Publisher
CACI International	Ad Agency
California Department Of Food & Agriculture	State Agency
California, State of	State / Territory
Californians Aware	Other
Campbell Ewald	Ad Agency
Capital Region Independent Media LLC	Publisher
Capitol One, Inc.	Advertiser
Cardinal Path	Reseller
Carmax (including Edmunds)	Publisher
CBC Creative	Ad Agency
Ceasar's Entertainment	Advertiser
Center for Investigative Reporting, The (d/b/a Reveal)	Publisher
Centers for Medicare and Medicaid Services	Federal Agency
Central Michigan University	State Agency
Charles Tombras Advertising, Inc.	Ad Agency
Charleston Publishing Co., Inc.	Publisher
Choozle	Ad Tech Provider
Clarion Publishing Company, Inc.	Publisher
Clarke Publishing, Inc.	Publisher
Clarksburg Publishing Company (doing business as WV News)	Publisher
Clickso	Advertiser
Cliffy Care Landscaping LLC	Advertiser
Coastal Point LLC	Publisher
Coca-Cola	Advertiser
College Of Southern Nevada	State Agency
College of Western Idaho	State Agency
Colorado Office Of Early Childhood	State Agency
Colorado State University	State Agency
Colorado, State of	State / Territory
Comcast (including FreeWheel, Beeswax, NBCUniversal (Publisher), Fandango, and Xfinity (Publisher))	Publisher / Ad Tech Provider

APPENDIX I

NO CONTACT LIST
AS OF AUGUST 15, 2023

Entity	Type of Entity
Commonwealth Publishing Company, Inc.	Publisher
comScore Media Measurement	Ad Tech Provider
CondeNast	Publisher
Connecticut Department Of Transportation	State Agency
Connecticut, State of	State / Territory
Consumable	Ad Tech Provider
Consumer Financial Protection Bureau	Federal Agency
ContextLogic Inc.	Advertiser
Criteo (including BidSwitch, Iponweb, and MediaGrid)	Ad Tech Provider
Crosby Marketing	Ad Agency
Custom Ink	Advertiser
CVP Corp. (f/k/a Atlas Research) OR Customer Value Partners, Inc.	Ad Agency
CVS Health Corp.	Publisher
Daily Beast, The	Publisher
Dallas Morning News, The	Publisher
Daniel J. Edelman, Inc. (d/b/a Edelman)	Ad Agency
Deloitte	Ad Agency
Delta Air Lines, Inc.	Advertiser
Delta Press Publishing Company, Inc.	Publisher
Delta-Democrat Publishing Company	Publisher
Demas, Bill (former Chief Executive Officer of Turn)	Ad Tech Provider
Denton Media Company / Denton Record Chronicle	Publisher
Dentsu	Ad Agency
Departamento de Educación de Puerto Rico	State Agency
Department of Defense (including U.S. Air Force, U.S. Army, and U.S. Navy)	Federal Agency
Devaney, Michael	Advertiser
Diffie, Whitfield	Other
Digg.com	Publisher
Digital Advertising Alliance	Industry Trade Organization / Trade Association
Digital Content Next	Industry Trade Organization / Trade Association
Digital Turbine (including AdColony and Fyber (SSP Mobile/In-app))	Ad Tech Provider
District Communications Group, LLC, The	Ad Agency
Dot Dash	Advertiser
DoubleVerify	Ad Tech Provider

APPENDIX I

NO CONTACT LIST
AS OF AUGUST 15, 2023

Entity	Type of Entity
Dow Jones & Company, Inc.	Publisher
Dr. Pepper Snapple Group	Advertiser
Drug Enforcement Administration (DEA)	Advertiser
DuckDuckGo	Other
Duty First Consulting LLC	Ad Agency
Eagle Printing Company	Publisher
Eastern Kentucky University	State Agency
eBay	Publisher
ECENT Corporation	Publisher
Elevation, Ltd.	Ad Agency
Emmerich Newspapers, Incorporated	Publisher
Enterprise-Tocsin, Inc.	Publisher
E-Planning (ePlanning)	Ad Tech Provider
Epom	Ad Tech Provider
Epsilon	Ad Tech Provider
Equativ (including Smart AdServer, DynAdmic, and LiquidM)	Ad Tech Provider
Etsy, Inc.	Publisher
Evadav	Ad Tech Provider
Exeter Government Services	Ad Agency
Experian	Ad Tech Provider
Eyeo (including Trestle)	Other
Ezoic	Ad Tech Provider
FanDuel 93.7	Advertiser
Fannie Mae (Federal National Mortgage Association)	Federal Agency
Farber, David	Other
Federal Bureau of Investigation (FBI)	Advertiser
Federal Bureau of Prisons (FBP)	Advertiser
Federal Trade Commission	Federal Agency
Fifty-Five	GMP-certified partner
First Amendment Coalition	Industry Trade Organization / Trade Association
Fischer, Addison	Other
Flag Publications, Inc.	Publisher
Fleishman Hillard	Ad Agency
Florida Department Of Agriculture & Consumer Services	State Agency

APPENDIX I

NO CONTACT LIST
AS OF AUGUST 15, 2023

Entity	Type of Entity
Florida Department Of Corrections	State Agency
Florida Department of Economic Opportunity	State Agency
Florida Department Of Education	State Agency
Florida Department Of Environmental Protection	State Agency
Florida Department Of State	State Agency
Florida Department Of Transportation	State Agency
Florida Fish & Wildlife Conservation Commission	State Agency
Florida, State of	State / Territory
Fors Marsh Group	Ad Agency
Fox Corporation	Publisher
Franklinton Publishing Co., Inc.	Publisher
Future of Privacy Forum	Industry Trade Organization / Trade Association
Gale Force Media, LLC	Publisher
Gannett Co., Inc.	Publisher
General Motors	Advertiser
Genius Media Group, Inc.	Publisher
Gould Enterprises, Inc.	Publisher
Grenada Star, Inc.	Publisher
Guardian, The	Publisher
GumGum	Ad Tech Provider
Hanson Law Firm, PC	Advertiser
Hattiesburg Publishing, Inc.	Publisher
Havas Media	Ad Agency
HD Media Company, LLC	Publisher
Hearst Communications, Inc. (including the Houston Chronicle)	Publisher
Hilton Worldwide Holdings, Inc.	Advertiser
Hispanic Communications Network (HCN)	Ad Agency
Holt, Rush	Other
Horizon Media	Ad Agency
I LOVE NY	State Agency
IAB Tech Lab	Industry Trade Organization / Trade Association
IAC (including Ask Media Group (ad agency))	Publisher
IBM (owner of The Weather Company)	Publisher
Idaho Department Of Health & Welfare	State Agency

APPENDIX I

NO CONTACT LIST
AS OF AUGUST 15, 2023

Entity	Type of Entity
Idaho Office Of Drug Policy	State Agency
Idaho Transportation Department	State Agency
Idaho, State of	State / Territory
Illinois Department Of Commerce & Economic Opportunity	State Agency
Illinois, State of	State / Territory
Imgur, Inc.	Publisher
Incubeta	Reseller
IndexExchange	Ad Tech Provider
Indiana Department Of Veterans' Affairs	State Agency
Indiana Municipal Power Agency	State Agency
Indiana University	State Agency
Indiana, State of	State / Territory
InfoLinks	Ad Tech Provider
Inform, Inc.	Publisher
Inmar	Ad Agency
Innovid	Publisher Ad Server; Reseller
Inskin	Publisher
Inspire Brands	Advertiser
Instacart	Publisher
Instapundit.com	Ad Agency
Integral Ad Science	Ad Tech Provider
Inter American Press Association	Industry Trade Organization / Trade Association
Internet Brands, Inc. (owner of PulsePoint (SSP) and WebMD Health Corp. (Publisher))	Publisher / Advertiser
IPG (The Interpublic Group of Companies, Inc.) (including IPG DXTRA, Inc. d/b/a Weber Shandwick; IW Group Inc.; McCann-Erickson USA, Inc.; Universal McCann Worldwide, LLC)	Ad Agency
J.O. Emmerich & Associates, Inc.	Publisher
J.R. Reingold & Associates, Inc. (d/b/a Reingold, Inc.)	Ad Agency
Jacob's Eye	Ad Agency
Jellyfish	Reseller
JLaSalle Enterprises LLC	Publisher
Johnson & Johnson	Advertiser
Jonathan Kanter	Individual

APPENDIX I

NO CONTACT LIST
AS OF AUGUST 15, 2023

Entity	Type of Entity
Journal, Inc.	Publisher
JumpFly	Ad Agency
Kantar Group (majority owned by Bain)	Ad Tech Provider
Kanter LLC	Ad Agency
Kargo Global, Inc. (including StitcherAds)	Ad Tech Provider
Kentucky Cabinet for Public Health	State Agency
Kentucky Community & Technical College System	State Agency
Kentucky Tourism, Arts, and Heritage Cabinet	State Agency
Kentucky, Commonwealth of	State / Territory
Kevel f/k/a AdZerk	Ad Tech Provider
Kinin, Inc.	Advertiser
Klonick, Kate	Other
Kohl's Corp.	Advertiser
Kosciusko Star-Herald, Inc.	Publisher
Kranzler Kingsley Communications Ltd.	Ad Agency
LA Times	Publisher
Lewis, Harry	Other
LG Electronics	Advertiser
Liberty Mutual	Advertiser
Liftable Media	Publisher
Liftoff (including information re Vungle)	Ad Tech Provider
LinkedIn	Ad Tech Provider
LiveNation Entertainment Inc	Advertiser
LMI (Logistics Management Institute)	Federal Contractor
Long & Foster Real Estate Companies	Advertiser
Louisiana Dept of Children and Family Services	State Agency
Louisiana Office of Tourism	State Agency
Louisiana State University	State Agency
Louisiana, State of	State / Territory
Louisville Publishing, Inc.	Publisher
Lowe's Companies, Inc.	Advertiser
LVMH	Advertiser
Macy's Inc.	Publisher / Advertiser
MadAds Media	Ad Tech Provider

APPENDIX I

NO CONTACT LIST
AS OF AUGUST 15, 2023

Entity	Type of Entity
Magnite (including Rubicon Project, Telaria, Carbon, SpotX, RTK Header Bidding, and SpringServe (ad server))	Ad Tech Provider
Mail Media, Inc. (Daily Mail)	Publisher
Major League Baseball	Publisher
Marin	Ad Tech Provider
Marion Publishing Company	Publisher
Mars, Inc.	Advertiser
Marx, Gary	Other
Match Group	Advertiser
McClatchy Company, The	Publisher
McNamee, Roger	Other
MDC Partners (Stagwell, Inc.)	Ad Agency
Media Institute, The	Other
Media.Monks	Reseller
Media.net	Ad Tech Provider
MediaMath, Inc.	Ad Tech Provider
Mediavine	Publisher
Merck	Advertiser
Meredith Corp.	Publisher
Merkle	Reseller
Meta Platforms, Inc. (f/k/a Facebook Inc.)	Ad Tech Provider
Michigan Department of Labor and Economic Opportunity	State Agency
Michigan, State of	State / Territory
Microsoft (including Xandr, MSN (Publisher), LinkedIn, Tapad, and Drawbridge)	Ad Tech Provider
Mighty Hive	GMP-certified partner
Mikula Web Solutions, Inc.	Publisher
Mindshare USA, LLC	Ad Agency
Minnesota Department Of Health	State Agency
Minnesota, State of	State / Territory
Mint Rose Day Spa LLC	Advertiser
MIQ Digital USA Inc.	Ad Agency
Mississippi Department Of Public Safety	State Agency
Mississippi Development Authority	State Agency
Mississippi State University	State Agency

APPENDIX I

NO CONTACT LIST
AS OF AUGUST 15, 2023

Entity	Type of Entity
Mississippi, State of	State / Territory
Missouri Department Of Transportation	State Agency
Missouri Division of Tourism	State Agency
Missouri, State of	State / Territory
MLex	Publisher
Monster Government Solutions Inc.	Ad Agency
Montana Office of Tourism	State Agency
Montana State University	State Agency
Montana, State of	State / Territory
Montgomery Publishing Co., Inc.	Publisher
Monumetric	Ad Tech Provider
Mother Jones	Publisher
Motley Fool	Publisher
Mozilla	Other
Multi Media Channels LLC	Publisher
Nation Company, L.P., The	Publisher
National Aeronautics and Space Administration	Federal Agency
National Football League	Publisher
National Freedom of Information Coalition	Other
National Highway Traffic Safety Admininistration	Federal Agency
National Press Photographers Association	Industry Trade Organization / Trade Association
Navy Federal Credit Union	Advertiser
Nebraska Department Of Transportation	State Agency
Nebraska, State of	State / Territory
Neeva	Advertiser
Negron, Kimberly	Advertiser
Neighborhood Newspapers, Inc.	Publisher
Nestle	Advertiser
Netflix	Publisher
Network Advertising Initiative	Industry Trade Organization / Trade Association
Nevada Department of Health & Human Services [Voluntary Production]	State Agency
Nevada Department Of Motor Vehicles	State Agency
Nevada Department of Tourism & Cultural Affairs	State Agency
Nevada Silver State Health Insurance Exchange	State Agency

APPENDIX I

NO CONTACT LIST
AS OF AUGUST 15, 2023

Entity	Type of Entity
Nevada State Treaurer	State Agency
Nevada, State of	State / Territory
New Hampshire Department of Natural & Cultural Resources	State Agency
New Hampshire, State of	State / Territory
New Jersey Department Of Health & Senior Services	State Agency
New Jersey, State of	State / Territory
New York State Energy Research & Development Authority	State Agency
New York Times Company, The	Publisher
New York, State of	State / Territory
News Corp.	Publisher
News Leaders Association, The	Other
News Media Alliance	Industry Trade Organization / Trade Association
News Media Association	Industry Trade Organization / Trade Association
Newton County Appeal Inc.	Publisher
Nexstar	Publisher
Nexstar Media Group, Inc.	Publisher
NextRoll (including AdRoll)	Ad Tech Provider
Nielsen Holdings	Ad Tech Provider
Nike	Advertiser
Nobid	Ad Tech Provider
North Carolina Department Of Health & Human Services	State Agency
North Carolina, State of	State / Territory
North Dakota Department Of Health (aka North Dakota Department of Health and Human Services)	State Agency
North Dakota Department of Human Services	State Agency
North Dakota, State of	State / Territory
North Texas Tollway Authority	State Agency
Northrup Grunman	Advertiser
NVR, Inc.	Advertiser
O’Kelley, Brian (former Chief Executive Officer of AppNexus)	Ad Tech Provider
Omnicom Group, Inc. (including DDB Chicago, Inc., Team DDB, GMMB, GSD&M LLC, Ketchum, Inc., OMD Worldwide, and Porter Novelli Inc.)	Ad Agency
OneMobile	Ad Tech Provider
OpenX Technologies, Inc.	Ad Tech Provider

APPENDIX I

NO CONTACT LIST
AS OF AUGUST 15, 2023

Entity	Type of Entity
Oracle (including Moat)	Ad Tech Provider
Organic Panaceas, LLC	Advertiser
Outbrain (including Zemanta (DSP) and AdNgin (Ad Server))	Ad Tech Provider
Pandora (Sirius XM Radio Inc.)	Publisher
Paramount Global (including CBS, Audacy Radio (owned by CBS), Viacom)	Publisher
PBS	Publisher
Peace Corps	Advertiser
Peel, Deborah C.	Other
Penske Media Corp.	Publisher
PepsiCo	Advertiser
Pinger	Publisher
Pinterest, Inc.	Ad Tech Provider
POLITICO LLC	Publisher
PopAds	Ad Tech Provider
PopCash	Ad Network
Prebid Header Bidding	Ad Tech Provider
Prevention Magazine	Publisher
Proctor & Gamble	Advertiser
Progressive Insurance	Advertiser
Progressive, Inc., The	Publisher
PropellerAds	Ad Tech Provider
Publica	Ad Tech Provider
Publicis Groupe, The (including Epsilon, Conversant, Publicis North America, and Publicis Media, Inc.)	Ad Agency
PubMatic, Inc.	Ad Tech Provider
Puerto Rico Department of Labor and Human Resources	State Agency
Puerto Rico Tourism Company	State Agency
Puerto Rico, Commonwealth of	State / Territory
Qualcomm	Advertiser
Quantcast	Ad Tech Provider
Raintree Medical And Chiropractic Center LLC	Advertiser
Reddit	Publisher
Rent-A-Center	Advertiser
Reporters Committee for Freedom of the Press, The	Other

APPENDIX I

NO CONTACT LIST
AS OF AUGUST 15, 2023

Entity	Type of Entity
Reuters News & Media Inc.	Publisher
RevContent	Ad Tech Provider
Revive	Ad Tech Provider
Rhode Island Department Of Health	State Agency
Rhode Island, State of	State / Territory
Richter 7 Inc.	Ad Agency
Robinson Communications Inc	Publisher
Rodrock Chiropractic Pa	Advertiser
Roku, Inc. (including DataXu (DSP))	Ad Tech Provider
Rome News Media, LLC	Publisher
Rutgers, The State University of New Jersey	State Agency
Samsung Electronics America, Inc. (including Samsung NEXT, LLC)	Advertiser
Savannah Publishing Co., Inc.	Publisher
SC Department of Social Services	State Agency
Schneier, Bruce	Other
Scott Publishing, Inc.	Publisher
Search Discovery	GMP-certified partner
Sharethrough Inc. (including DistrictM)	Ad Tech Provider
SHE Media	Ad Tech Provider
Simpson Publishing Co., Inc.	Publisher
Singh, Sunny	Advertiser
Skechers	Advertiser
Skimlinks	Ad Tech Provider
SkinnySchool LLC d/b/a Maria Marques Fitness	Advertiser
Smartly.io	Reseller
Smithsonian Institution	Advertiser
Snap, Inc.	Ad Tech Provider
Society of Professional Journalists	Other
Something Extra Publishing, Inc.	Publisher
Sonobi	Ad Tech Provider
Sortable / Freestar	Ad Tech Provider
South Carolina Department of Parks, Recreation, and Tourism	State Agency
South Carolina, State of	State / Territory
South Dakota Department of Education	State Agency

APPENDIX I

NO CONTACT LIST
AS OF AUGUST 15, 2023

Entity	Type of Entity
South Dakota Department Of Human Services	State Agency
South Dakota State University	State Agency
South Dakota, State of	State / Territory
Southern Arkansas University	State Agency
Southern Community Newspapers, Inc.	Publisher
Southern Utah University	State Agency
Sovrn Holdings, Inc.	Ad Tech Provider
Spotify	Publisher
SPX Total Body Fitness LLC	Advertiser
StackAdapt	Ad Tech Provider
Starbucks	Advertiser
State Farm	Advertiser
State University Of New York	State Agency
Static Media	Publisher
Stellman, Michael	Advertiser
Sterling International Consulting Group	Publisher
Stratacomm LLC	Ad Agency
Strava	Publisher
Sunland Publishing Company, Inc.	Publisher
Surefreight Global LLC	Advertiser
Susan Athey	Individual
Sweepstakes Today, LLC	Publisher
T. Rowe Price	Advertiser
Taboola	Ad Tech Provider
Tallulah Publishing, Inc.	Publisher
Target Corporation	Publisher
Tate Record, Inc.	Publisher
Teads	Ad Tech Provider
Tennessee Highway Safety Office	State Agency
Tennessee, State of	State / Territory
Tennis.com	Publisher
Texas A&M University	State Agency
Texas Department of Information Resources, The (DIR)	State Agency
Texas Department Of Motor Vehicles	State Agency

APPENDIX I

NO CONTACT LIST
AS OF AUGUST 15, 2023

Entity	Type of Entity
Texas Department Of Transportation	State Agency
Texas General Land Office, The	State Agency
Texas Office of the Governor, Economic Development & Tourism	State Agency
Texas, State of	State / Territory
The Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF)	Advertiser
The Goodway Group	Ad Agency
TIAA	Advertiser
Ticketmaster	Publisher
Tiktok	Ad Tech Provider
Timehop (creator of Nimbus)	Ad Tech Provider
Times Journal, Inc.	Publisher
Tinuiti	Ad Agency
Trade Desk, Inc., The	Ad Tech Provider
Tremor International Ltd. (including RhythmOne/Unruly (SSP), Unruly Group Limited, Amobee, Inc., Tremor Video, and Spearad GmbH)	Ad Tech Provider
Trilogy Federal, LLC	Ad Agency
TripAdvisor	Publisher / Advertiser
Triple Lift, Inc.	Ad Tech Provider
Trustworthy Accountability Group	Industry Trade Organization / Trade Association
Tully Center for Free Speech	Other
Turkle, Sherry	Other
Turn	Ad Tech Provider
TWC Product & Tech	Publisher
Twitch	Publisher
Twitter, Inc.	Ad Tech Provider
U.S. Air Force	Federal Agency
U.S. Army	Federal Agency
U.S. Census Bureau	Federal Agency
U.S. Department of Agriculture	Federal Agency
U.S. Department of Defense	Federal Agency
U.S. Department of Education	Federal Agency
U.S. Department of Energy	Federal Agency
U.S. Department of Health and Human Services	Federal Agency
U.S. Department of Homeland Security	Federal Agency

APPENDIX I

NO CONTACT LIST
AS OF AUGUST 15, 2023

Entity	Type of Entity
U.S. Department of Housing and Urban Development	Federal Agency
U.S. Department of Interior	Federal Agency
U.S. Department of Labor	Federal Agency
U.S. Department of State	Federal Agency
U.S. Department of Transportation	Federal Agency
U.S. Department of Treasury	Federal Agency
U.S. Department of Veterans Affairs	Federal Agency
U.S. General Services Administration	Federal Agency
U.S. Navy	Federal Agency
U.S. Postal Service	Federal Agency
Unilever	Advertiser
Union City Daily Messenger, Inc.	Publisher
United States of America	US Government
United States Social Security Administration	Federal Agency
Unity (including ironSource)	Ad Tech Provider
Universidad de Puerto Rico	State Agency
University of Alaska	State Agency
University Of Arkansas	State Agency
University Of California	State Agency
University Of Connecticut School Of Law	State Agency
University of Florida (including Florida Institute of Food & Agricultural Sciences)	State Agency
University Of Idaho	State Agency
University Of Illinois System	State Agency
University Of Minnesota	State Agency
University Of Missouri	State Agency
University Of Montana, The	State Agency
University Of Nebraska Omaha	State Agency
University Of Nevada	State Agency
University Of North Carolina At Chapel Hill	State Agency
University Of North Dakota	State Agency
University Of Rhode Island	State Agency
University Of South Carolina	State Agency
University Of South Dakota	State Agency
University Of Tennessee, The	State Agency

APPENDIX I

NO CONTACT LIST
AS OF AUGUST 15, 2023

Entity	Type of Entity
University Of Texas, The	State Agency
University Of Virginia, The	State Agency
University Of Washington	State Agency
University System Of New Hampshire	State Agency
Univision	Publisher
URX	Ad Tech Provider
US Trade and Development Agency	Advertiser
Utah Department Of Health	State Agency
Utah Office of Tourism	State Agency
Utah, State of	State / Territory
Verizon	Ad Tech Provider
Verizon Communications	
Verve Group, The (including Smaato and AppMonet)	Ad Tech Provider
Viant Technology (including Adelphic Mobile)	Ad Tech Provider
Vimeo	Publisher
Virginia Department For Aging & Rehabilitative Services	State Agency
Virginia, Commonwealth of	State / Territory
Vitor Lindo	Advertiser
Vixie, Paul	Other
Vox Media, Inc. (Concert by Vox)	Ad Tech Provider
Walmart Inc.	Publisher
Walt Disney Company, The (including Hulu, ABC, and ESPN)	Publisher
Warner Bros. Discovery (including CNN, Zedo (SSP), and Turner Entertainment)	Publisher / Ad Tech Provider
Washington Post, The (Nash Holdings LLC)	Publisher
Washington State Department Of Health	State Agency
Washington, State of	State / Territory
Wayfair, Inc.	Advertiser
Weakley County Press, Inc	Publisher
Wells Fargo	Advertiser
West Virginia Department Of Commerce	State Agency
West Virginia University	State Agency
West Virginia, State of	State / Territory
Western Nevada College	State Agency
WNET	Publisher

APPENDIX I

NO CONTACT LIST
AS OF AUGUST 15, 2023

Entity	Type of Entity
Wordpress (owned by Automattic; including OiO Publisher (ad server))	Publisher
WPP (including GroupM Worldwide LLC, VMLY&R, Wavemaker, and Young & Rubicam Inc.)	Ad Agency
Yahoo Inc.	Ad Tech Provider
Yazoo Newspaper Co., Inc.	Publisher
Yberra, Sara	Advertiser
Yelp Inc.	Publisher
Yieldmo, Inc.	Ad Tech Provider
ylliX	Ad Tech Provider
Zedo, Inc.	Ad Tech Provider
Zeta Global (Zeta Interactive)	Ad Tech Provider
Zuboff, Shoshana	Other
Zynga (Take-Two Interactive; including Chartboost)	Other

APPENDIX J
EXHIBITS EXCLUDING RESPONDENTS SELECTING DECOY ANSWER OPTIONS

APPENDIX EXHIBIT 1

HIGHER-SPEND ADVERTISER SURVEY
RESPONSE STATISTICS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

	Status	#	%
[1]	**Invited to Complete Survey**	**4,978**	**100%**
[2]	**Clicked on Survey Link**	**2,348**	**100%**
[3]	**Screened Out of Survey**	**1,538**	**66%**
[4]	*CAPTCHA*	*13*	*1%*
[5]	*Age*	*9*	*0%*
[6]	*State*	*8*	*0%*
[7]	*Job Responsibilities*	*394*	*17%*
[8]	*Not Employed by a Advertiser/Marketer*	*678*	*29%*
[9]	*Annual Advertising Spend Less than $500K*	*230*	*10%*
[10]	*No Digital Advertising Spend*	*1*	*0%*
[11]	*Did Not Use Display Advertising*	*95*	*4%*
[12]	*Did Not Use Programmatic Display*	*57*	*2%*
[13]	*Not Involved in Decision Making Roles for Display Advertising*	*35*	*1%*
[14]	*Failed Attention Check*	*16*	*1%*
[15]	*Nonsensical Responses*	*2*	*0%*
[16]	*Overquota Respondents*	*-*	*0%*
[17]	**Self-Termination**	**207**	**9%**
[18]	**Completed the Survey**	**603**	**100%**
[19]	**Removed from Sample**	**101**	**17%**
[20]	*Slowpokes and Speeders*	*7*	*1%*
[21]	*Asked to be Excluded*	*94*	*16%*
[22]	**Analytical Sample**	**502**	**100%**
[23]	*Selected a Decoy Option*	*49*	*10%*
[24]	**Analytical Sample (Excluding Respondents Selecting a Decoy Option)**	**453**	**90%**

Notes & Sources:
From Higher-Spend Advertiser Survey.
[4] Respondents who failed the CAPTCHA three times were screened out of the study.
[5] Respondents who selected “Under 18” or “Prefer not to answer” in QS3 were screened out of the study.
[6] Respondents who selected “Other” or “Don’t know / Unsure” in QS5 were screened out of the study.

APPENDIX EXHIBIT 1

HIGHER-SPEND ADVERTISER SURVEY
RESPONSE STATISTICS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

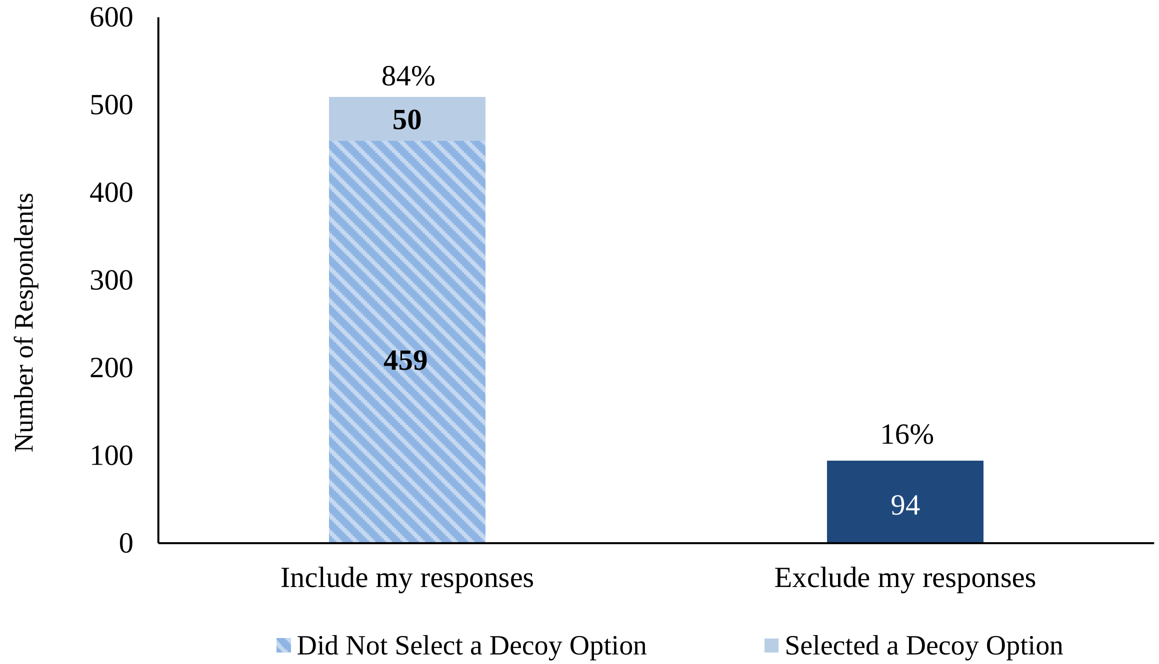
Notes & Sources (cont.):

[7] Respondents who indicated in QS6 that, as part of their job responsibilities, they do not have any involvement with "Advertising or Marketing" were screened out of the study.
[8] Respondents who indicated in QS7 that they did not work for a "Advertiser/Marketer" were screened out of the study.
[9] Respondents who indicated in QS10 that their company spent less than $500,000 on all advertising in the last 12 months or selected "Don't know / Unsure" were screened out of the study.
[10] Respondents who indicated in QS11 that the percentage of their total advertising budget spent on digital (online) advertising was zero were screened out of the study.
[11] Respondents who did not indicate in QS12 that they used display advertising in the past year were screened out of the study.
[12] Respondents who did not indicate in QS13 that their business unit/team used programmatic transaction methods to purchase display ad inventory, or selected "Don't know / Unsure" were screened out of the study.
[13] Respondents who selected "None of the above" or "Don't know / Unsure" in QS15 were screened out of the study.
[14] Respondents who did not select "Somewhat likely" in QS16 were screened out of the study.
[15] Removed by survey vendor from raw data for providing nonsensical responses to open-ended questions, such as "R5U54U" and "The study is quite nice to carry on."
[16] Respondents were terminated due to entering the survey after it had been closed for sampling.
[17] Respondents who only completed part of the survey.
[20] Respondents who took less than 100 seconds (1.67 minutes) or more than 10,800 seconds (3 hours) to complete the survey were removed from the analysis.
[21] Respondents were asked if they are willing to participate in this survey after completing the questionnaire. Respondents who selected "Exclude my responses" in QF1 were removed from the data by the panel vendor.
[23] Respondents who selected one or more decoy options in the survey were removed from the analysis. These respondents selected "Ad Step Technologies," "Quorexx" in Q8, and/or "FriendLinx" in Q5.
[24] These respondents were used in the analysis.

APPENDIX EXHIBIT 2

HIGHER-SPEND ADVERTISER SURVEY
SURVEY PARTICIPATION PREFERENCE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

QF1: This survey is being conducted by consultants that have been retained on behalf of Google in connection with pending antitrust lawsuits in which the plaintiffs allege that Google engaged in anticompetitive conduct related to digital advertising. If you are willing to participate in this survey, please click "Include my responses" below. As a reminder, your responses will be kept anonymous and will be analyzed as part of a larger sample of responses. If you do not want to participate in this survey, please click "Exclude my responses" below.



Notes & Sources:
From Higher-Spend Advertiser Survey.
Includes respondents who completed the survey.
Respondents who indicated that they wanted their responses excluded from the survey were removed from the data by the panel vendor.

APPENDIX EXHIBIT 3

HIGHER-SPEND ADVERTISER SURVEY
RESPONDENT DEMOGRAPHICS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

		#	%
		[A]	[B]
	Age		
[1]	18 - 34	88	19%
[2]	35 - 49	301	66%
[3]	50 - 64	64	14%
[4]	65 or above	-	0%
[5]	Total	453	100%
	Gender		
[6]	Female	122	27%
[7]	Male	331	73%
[8]	Other	-	0%
[9]	Prefer not to answer	-	0%
[10]	Total	453	100%

Source:
From Higher-Spend Advertiser Survey.

APPENDIX EXHIBIT 4

HIGHER-SPEND ADVERTISER SURVEY
MARKET SECTORS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

QS8: Which of the following, if any, best characterizes the market sector/industry your company is in? (Please select only one option.)

	Market Sector / Industry	Total Respondents #	Total Respondents %
	[A]	[B]	[C]
[1]	Advertising or Marketing	140	31%
[2]	Retail (including Ecommerce)	63	14%
[3]	B2B/Services for Businesses	46	10%
[4]	Apparel/Fashion	25	6%
[5]	Food and Beverage	25	6%
[6]	Media and Entertainment	21	5%
[7]	Financial Products/Services for Consumers (including Fintech)	21	5%
[8]	Travel and Hospitality	15	3%
[9]	Consumer Electronics	14	3%
[10]	Home Products/Appliances	13	3%
[11]	Health Care or Medical Services	13	3%
[12]	Health and Beauty Products	11	2%
[13]	Telecommunications	9	2%
[14]	Restaurants	7	2%
[15]	Automotive	6	1%
[16]	Pharmaceuticals and Remedies (Rx or OTC)	5	1%
[17]	Education	3	1%
[18]	Government	2	0%
[19]	Non-Profit	1	0%
[20]	Other	13	3%
[21]	Total	453	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for “Other.”

APPENDIX EXHIBIT 5

HIGHER-SPEND ADVERTISER SURVEY
JOB TITLES
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

QS9: Which of the following best characterizes your current job title/level? (Please select only one option.)

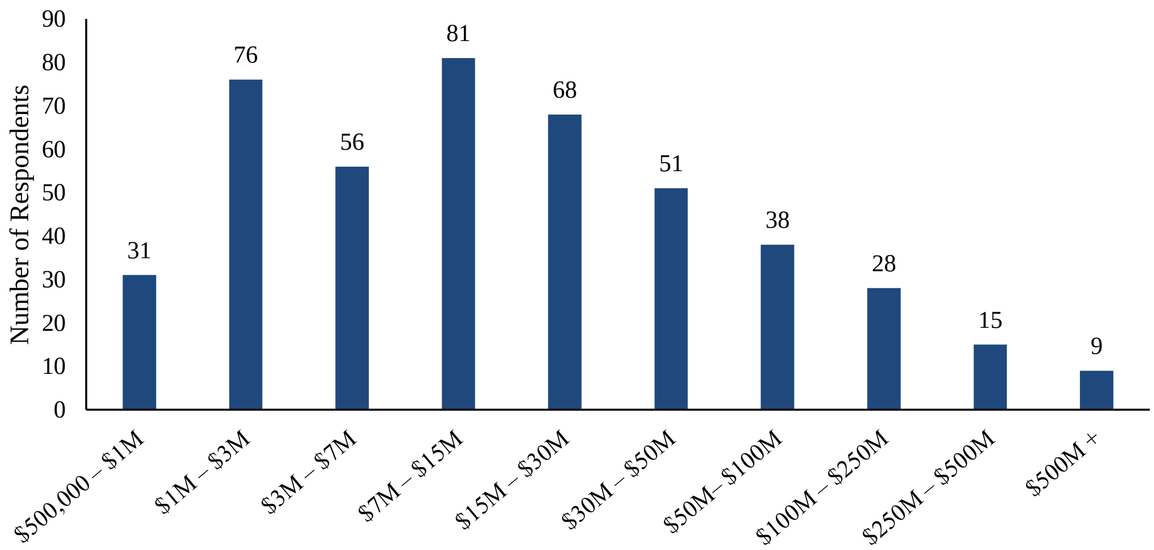
	Job Title / Level	Total Respondents #	Total Respondents %
	[A]	[B]	[C]
[1]	Director	151	33%
[2]	C-Level (CEO, COO, CMO, etc.)	97	21%
[3]	Vice President, SVP, EVP, President, etc.	93	21%
[4]	Manager	62	14%
[5]	Supervisor/Department Head/Group Manager	33	7%
[6]	Strategist	10	2%
[7]	Planner	2	0%
[8]	Associate	2	0%
[9]	Analyst	2	0%
[10]	Buyer	1	0%
[11]	Other	-	0%
[12]	Total	453	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for “Other.”

APPENDIX EXHIBIT 6

HIGHER-SPEND ADVERTISER SURVEY
ANNUAL AD SPEND
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

QS10: Approximately how much did your company spend in the last 12 months on all advertising, including all digital types (e.g., display, video, audio, social) plus all nondigital types (e.g., TV types, print, OOH, etc.)? (Please select only one option.)

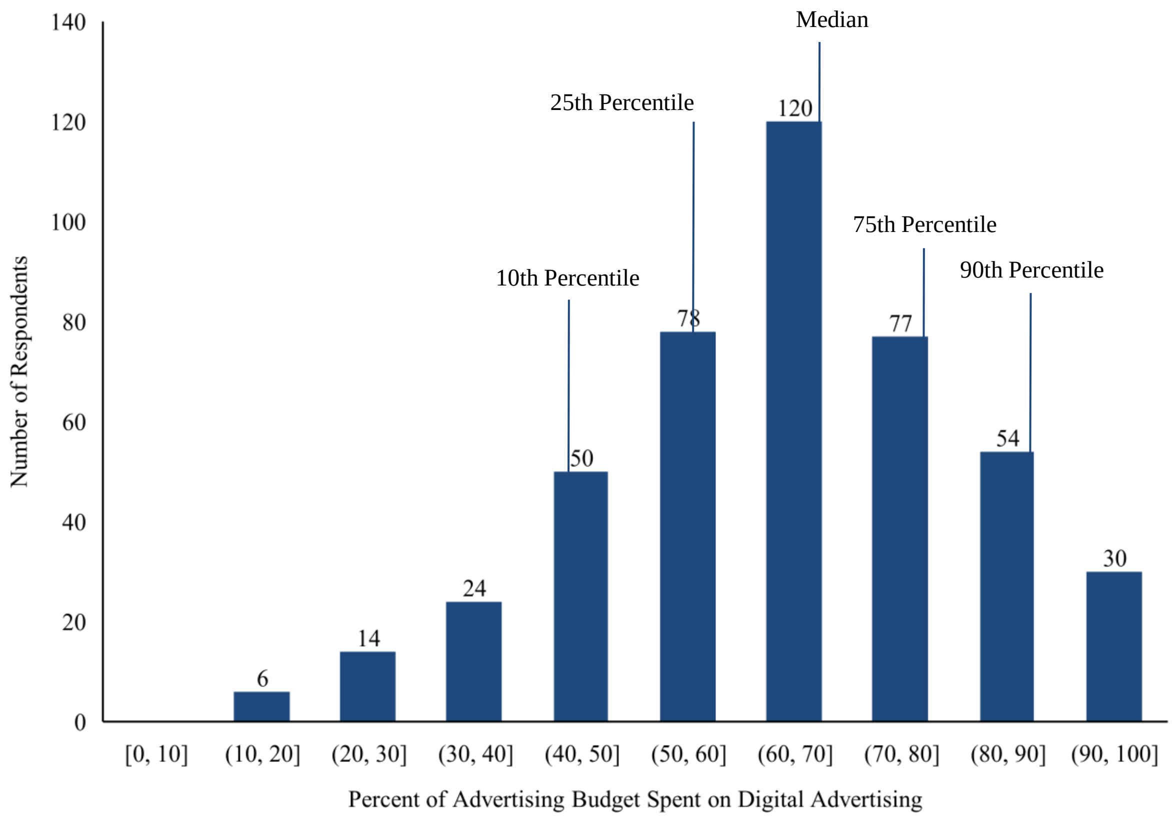


Notes & Sources:
From Higher-Spend Advertiser Survey.

APPENDIX EXHIBIT 7

HIGHER-SPEND ADVERTISER SURVEY
PERCENT OF BUDGET SPENT ON DIGITAL ADVERTISING
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

QS11: Please think about your business unit/team's total advertising budget. In the past year, what percentage of your business unit/team's total advertising budget was used for digital (online) advertising, as opposed to offline advertising? Please give your best estimate.



Notes & Sources:
From Higher-Spend Advertiser Survey.
Respondents who entered zero for digital (online) advertising were screened out of the survey.

APPENDIX EXHIBIT 8

HIGHER-SPEND ADVERTISER SURVEY
TYPES OF DIGITAL ADVERTISING USED
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

QS12: Which of the following types of digital advertising, if any, have you used in the past year? Please review the description of each advertising type carefully. (Please select all that apply.)

		Total Respondents	
	Advertising Type	#	%
	[A]	[B]	[C]
[1]	Display	453	100%
[2]	Social	347	77%
[3]	Search	347	77%
[4]	Digital Video	292	64%
[5]	Email	282	62%
[6]	eCommerce Platforms	242	53%
[7]	Connected TV	204	45%
[8]	App/In-App	195	43%
[9]	Digital Audio	178	39%
[10]	Other	2	0%
[11]	Total	453	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.
Respondents who did not select "Display" were screened out of the survey.
Percentages do not add up to 100% because respondents can select multiple options.
Sorted in descending order based on column [B], except for "Other."

APPENDIX EXHIBIT 9

HIGHER-SPEND ADVERTISER SURVEY
NUMBER OF TYPES OF DIGITAL ADVERTISING USED
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

QS12: Which of the following types of digital advertising, if any, have you used in the past year? Please review the description of each advertising type carefully. (Please select all that apply.)

		Total Respondents	
	Number of Types Selected	#	%
	[A]	[B]	[C]
[1]	1	66	15%
[2]	2	9	2%
[3]	3	14	3%
[4]	4	40	9%
[5]	5	63	14%
[6]	6	75	17%
[7]	7	64	14%
[8]	8	57	13%
[9]	9	63	14%
[10]	10	2	0%
[11]	Total	453	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.

APPENDIX EXHIBIT 10

HIGHER-SPEND ADVERTISER SURVEY
DISPLAY ADVERTISING TRANSACTION METHODS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

QS13: Which of the following transaction methods has your business unit/team (or your ad agency) used to purchase display ad inventory in the past year? (Please select all that apply.)

		Total Respondents	
	Transaction Method	#	%
	[A]	[B]	[C]
[1]	Programmatic Only	195	43%
[2]	Programmatic and Direct Deals	258	57%
[3]	Total	453	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.
Respondents who selected "Direct Deals Only," "None of the Above" or "Don't know / Unsure" were screened out of the survey.

APPENDIX EXHIBIT 11

HIGHER-SPEND ADVERTISER SURVEY
SOCIAL MEDIA PLATFORMS USED
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

QS14: You indicated that your business unit/team has used social advertising in the past year. Which of the following social media platforms, if any, has your business unit/team advertised on in the past year? (Please select all that apply.)

		Total Respondents	
	Social Media Platform	#	%
	[A]	[B]	[C]
[1]	Facebook	310	89%
[2]	Instagram	271	78%
[3]	LinkedIn	231	67%
[4]	Twitter	192	55%
[5]	Tiktok	182	52%
[6]	Snapchat	115	33%
[7]	Pinterest	112	32%
[8]	Reddit	69	20%
[9]	Tumblr	9	3%
[10]	FriendLinx	-	0%
[11]	Other	5	1%
[12]	None of the Above	-	0%
[13]	Don’t know / Unsure	-	0%
[14]	Total Shown Question	347	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for “Other,” “None of the above,” and “Don’t know / Unsure.”
Percentages do not add up to 100% because respondents can select multiple options.
Respondents were only shown QS14 if they indicated in QS12 that their business unit/team had used social advertising in the past year.

APPENDIX EXHIBIT 12

HIGHER-SPEND ADVERTISER SURVEY
USE OF AD AGENCY
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q2: Do you or do you not use an ad agency for digital advertising?
(Please select only one option.)

	Response Options	#	%
	[A]	[B]	[C]
[1]	Yes, I use an ad agency for digital advertising	301	66%
[2]	No, I do not use an ad agency for digital advertising	148	33%
[3]	Don’t know / Unsure	4	1%
[4]	Total Shown Question	453	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.

APPENDIX EXHIBIT 13

HIGHER-SPEND ADVERTISER SURVEY
PURPOSE OF AD AGENCY USE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q3: For which, if any, of the following do you use an ad agency? (Please select all that apply.)

		Total Respondents	
	Response Options	#	%
	[A]	[B]	[C]
[1]	Media/marketing strategies	205	68%
[2]	Implementation of advertising (e.g., placing bids, interacting with DSPs)	191	63%
[3]	Tracking advertising performance	172	57%
[4]	Running advertising tests/experiments	158	52%
[5]	Content and/or creatives	158	52%
[6]	Allocating advertising funds across advertising types	126	42%
[7]	Consulting services	110	37%
[8]	Customer research	109	36%
[9]	Budgeting decisions	87	29%
[10]	Inventory access	76	25%
[11]	Other	-	0%
[12]	None of the above	-	0%
[13]	Don’t know / Unsure	-	0%
[14]	Total Shown Question	301	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for “Other,” “None of the above,” and “Don’t know / Unsure.”
Respondents were only shown Q3 if they indicated in Q2 that they used an ad agency for digital advertising.
Percentages do not add up to 100% because respondents can select multiple options.

APPENDIX EXHIBIT 14

HIGHER-SPEND ADVERTISER SURVEY
DIGITAL ADVERTISING BUDGET SHARE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q4: What is your best estimate of the share of your business unit/team's digital advertising budget that was used for each of these types of advertising in the past year? Specifically, please allocate 100% across the different types of digital advertising shown below based on the share of your total digital advertising budget spent on each type. The total should add up to 100%.

	Advertising Type	# of Respondents	Mean	Median
	[A]	[B]	[C]	[D]
[1]	Programmatic Display	445	29%	15%
[2]	Search	341	17%	10%
[3]	Social	340	13%	10%
[4]	Digital Video	286	8%	5%
[5]	Email	276	6%	5%
[6]	Direct Deals Display	251	7%	5%
[7]	eCommerce Platforms	236	8%	3%
[8]	Connected TV	198	5%	0%
[9]	App/In-App	189	5%	0%
[10]	Digital Audio	173	3%	0%
[11]	Other	2	0%	0%
[12]	Don't know / Unsure	8	n/a	n/a
[13]	Total Shown Question	453		

Notes & Sources:
From Higher-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for "Other" and "Don't know / Unsure."
Respondents were shown their responses from QS12 and QS13. They were asked to allocate across all selected types.
Respondents can hover their mouse over each digital advertising type to review the type description.
[B] Shows number of respondents who allocated a budget for each advertising type.
[C]-[D] Budget allocated for an advertising type is assumed to be equal to 0 if respondents did not select the advertising type in QS12 or QS13.

APPENDIX EXHIBIT 15

HIGHER-SPEND ADVERTISER SURVEY
RESPONSE TO PROGRAMMATIC DISPLAY COST INCREASE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q5: Now suppose that, based on your analysis, the cost of programmatic display advertising has recently increased by a small but significant amount, and will remain elevated for the foreseeable future. Assume further that, based on similar analyses for other digital advertising types, the costs of other digital advertising types have not changed and are not expected to change. So if the cost of programmatic display advertising increases (while the cost of other advertising types remains the same), will you or won't you divert some of your advertising spending for the coming year to other types of digital advertising?

	Response Options	#	%
	[A]	[B]	[C]
[1]	Will Divert Spending	262	58%
[2]	Will Not Divert Spending	164	36%
[3]	Don't know / Unsure	27	6%
[4]	Total Shown Question	453	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.

APPENDIX EXHIBIT 16

HIGHER-SPEND ADVERTISER SURVEY
ADVERTISING TYPES TO WHICH SPENDING WOULD BE DIVERTED
DUE TO PROGRAMMATIC DISPLAY COST INCREASE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q6: To which other types of digital advertising below, if any, would you divert your advertising spending for the coming year as a result of the increase in the cost of programmatic display advertising?

	Advertising Type	Respondents Indicating They Would Divert Spending to the Advertising Type	
		#	%
	[A]	[B]	[C]
[1]	Social	143	55%
[2]	Search	140	53%
[3]	Digital Video	109	42%
[4]	Direct Deals Display	85	32%
[5]	eCommerce Platforms	84	32%
[6]	Email	81	31%
[7]	Connected TV	80	31%
[8]	App/In-App	67	26%
[9]	Digital Audio	59	23%
[10]	Other	2	1%
[11]	None of the above	1	0%
[12]	Don’t know / Unsure	4	2%
[13]	Total Shown Question	262	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for “Other,” “None of the above,” and “Don’t know / Unsure.”
Respondents can hover their mouse over each digital advertising type to review the advertising type description.
Percentages do not add up to 100% because respondents can select multiple options.
Respondents were only shown Q6 if they indicated in Q5 that they would divert advertising spending to other types of digital advertising.

APPENDIX EXHIBIT 17

HIGHER-SPEND ADVERTISER SURVEY
NUMBER OF ADVERTISING TYPES TO WHICH SPENDING WOULD BE DIVERTED DUE TO PROGRAMMATIC DISPLAY COST INCREASE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q6: To which other types of digital advertising below, if any, would you divert your advertising spending for the coming year for the client you spend the most time on, as a result of the increase in the cost of programmatic display advertising?

	Number of Advertising Types Diverted Spending To	Respondents Indicating They Would Divert Spending to the Number of Advertising Types	
		#	%
	[A]	[B]	[C]
[1]	0	1	0%
[2]	1	31	12%
[3]	2	73	28%
[4]	3	64	24%
[5]	4	31	12%
[6]	5	29	11%
[7]	6	12	5%
[8]	7	5	2%
[9]	8	3	1%
[10]	9	9	3%
[11]	10	-	0%
[12]	Don’t know / Unsure	4	2%
[13]	Total Shown Question	262	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.
Respondents were only shown Q6 if they indicated in Q5 that they would divert advertising spending to other types of digital advertising.
Respondents can hover their mouse over each digital advertising type to review the advertising type description.

APPENDIX EXHIBIT 18

HIGHER-SPEND ADVERTISER SURVEY
EXTENT OF SPENDING CHANGES AS A RESULT OF PROGRAMMATIC DISPLAY COST INCREASE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q7: In your previous answer, you indicated that the increase in the cost of programmatic display advertising will lead you to divert some of your advertising spending to the types of digital advertising listed below. Please use the sliders below to indicate, on a scale of 0 to 10, the extent to which you would divert (that is, increase) advertising spending for the coming year to each type of digital advertising that you just indicated. For each digital advertising type below, please select 0 if you expect to keep spending on that type of digital advertising for the coming year and 10 if you expect to substantially increase spending on that type of digital advertising.

		Total	Average Extent	Number of Respondents by Extent of Increase											Don't know
	Advertising Type	Respondents	of Increase	0	1	2	3	4	5	6	7	8	9	10	/ Unsure
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]
[1]	Social	143	6.4	-	1	4	16	10	18	15	28	24	19	7	1
[2]	Search	140	6.6	-	2	4	5	13	15	18	28	28	21	5	1
[3]	Digital Video	109	6.7	1	-	5	8	6	12	14	16	17	20	10	-
[4]	Direct Deals Display	85	7.0	-	1	3	6	-	6	11	19	16	15	7	1
[5]	eCommerce Platforms	84	7.9	-	-	-	2	1	3	7	17	20	19	13	2
[6]	Email	81	6.7	2	2	3	4	3	5	11	15	17	12	7	-
[7]	Connected TV	80	6.6	-	3	3	6	4	7	14	10	15	7	11	-
[8]	App/In-App	67	7.6	-	-	1	1	3	1	6	16	20	12	7	-
[9]	Digital Audio	59	7.0	-	3	1	3	2	6	6	2	18	15	3	-
[10]	Other	2	4.5	-	-	-	1	-	-	1	-	-	-	-	-

		Total	Average Extent	Share of Respondents by Extent of Increase											Don't know
	Advertising Type	Respondents	of Increase	0	1	2	3	4	5	6	7	8	9	10	/ Unsure
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]
[1]	Social	100%	n/a	0%	1%	3%	11%	7%	13%	10%	20%	17%	13%	5%	1%
[2]	Search	100%	n/a	0%	1%	3%	4%	9%	11%	13%	20%	20%	15%	4%	1%
[3]	Digital Video	100%	n/a	1%	0%	5%	7%	6%	11%	13%	15%	16%	18%	9%	0%
[4]	Direct Deals Display	100%	n/a	0%	1%	4%	7%	0%	7%	13%	22%	19%	18%	8%	1%
[5]	eCommerce Platforms	100%	n/a	0%	0%	0%	2%	1%	4%	8%	20%	24%	23%	15%	2%
[6]	Email	100%	n/a	2%	2%	4%	5%	4%	6%	14%	19%	21%	15%	9%	0%
[7]	Connected TV	100%	n/a	0%	4%	4%	8%	5%	9%	18%	13%	19%	9%	14%	0%
[8]	App/In-App	100%	n/a	0%	0%	1%	1%	4%	1%	9%	24%	30%	18%	10%	0%
[9]	Digital Audio	100%	n/a	0%	5%	2%	5%	3%	10%	10%	3%	31%	25%	5%	0%
[10]	Other	100%	n/a	0%	0%	0%	50%	0%	0%	50%	0%	0%	0%	0%	0%

APPENDIX EXHIBIT 18

HIGHER-SPEND ADVERTISER SURVEY
EXTENT OF SPENDING CHANGES AS A RESULT OF PROGRAMMATIC DISPLAY COST INCREASE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Notes & Sources:
From Higher-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for "Other."
Respondents were shown their answer choices from Q6.
Respondents were only shown Q7 if they did not select "None of the above" or "Don't know/Unsure" in Q6.
Respondents can hover their mouse over each digital advertising type to review the type description.
Percentages calculated by dividing the number of people choosing the extent of increase for an advertising type by the total number of people selecting the advertising type to which to divert spending.
[C] Calculated as the average extent of increase in [D] through [N], weighted by the number of respondents.

APPENDIX EXHIBIT 19

HIGHER-SPEND ADVERTISER SURVEY
EXTENT OF SPENDING CHANGES AS A RESULT OF PROGRAMMATIC DISPLAY COST INCREASE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q7: In your previous answer, you indicated that the increase in the cost of programmatic display advertising will lead you to divert some of your advertising spending to the types of digital advertising listed below. Please use the sliders below to indicate, on a scale of 0 to 10, the extent to which you would divert (that is, increase) advertising spending for the coming year to each type of digital advertising that you just indicated. For each digital advertising type below, please select 0 if you expect to keep spending on that type of digital advertising for the coming year and 10 if you expect to substantially increase spending on that type of digital advertising.

		Total	Number of Respondents by Extent of Increase			Don't know
	Advertising Type	Respondents	0 – 3	4 – 6	7 – 10	/ Unsure
	[A]	[B]	[C]	[D]	[E]	[F]
[1]	Social	143	21	43	78	1
[2]	Search	140	11	46	82	1
[3]	Digital Video	109	14	32	63	-
[4]	Direct Deals Display	85	10	17	57	1
[5]	eCommerce Platforms	84	2	11	69	2
[6]	Email	81	11	19	51	-
[7]	Connected TV	80	12	25	43	-
[8]	App/In-App	67	2	10	55	-
[9]	Digital Audio	59	7	14	38	-
[10]	Other	2	1	1	-	-

		Total	Share of Respondents by Extent of Increase			Don't know
	Advertising Type	Respondents	0 – 3	4 – 6	7 – 10	/ Unsure
	[A]	[B]	[C]	[D]	[E]	[F]
[1]	Social	100%	15%	30%	55%	1%
[2]	Search	100%	8%	33%	59%	1%
[3]	Digital Video	100%	13%	29%	58%	0%
[4]	Direct Deals Display	100%	12%	20%	67%	1%
[5]	eCommerce Platforms	100%	2%	13%	82%	2%
[6]	Email	100%	14%	23%	63%	0%
[7]	Connected TV	100%	15%	31%	54%	0%
[8]	App/In-App	100%	3%	15%	82%	0%
[9]	Digital Audio	100%	12%	24%	64%	0%
[10]	Other	100%	50%	50%	0%	0%

APPENDIX EXHIBIT 19

HIGHER-SPEND ADVERTISER SURVEY
EXTENT OF SPENDING CHANGES AS A RESULT OF PROGRAMMATIC DISPLAY COST INCREASE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Notes & Sources:
From Higher-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for "Other."
Respondents were shown their answer choices from Q6.
Respondents were only shown Q7 if they did not select "None of the above" or "Don't know/Unsure" in Q6.
Respondents can hover their mouse over each digital advertising type to review the type description.
Percentages calculated by dividing the number of people choosing the extent of increase for an advertising type by the total number of people selecting the advertising type to which to divert spending.

APPENDIX EXHIBIT 20

HIGHER-SPEND ADVERTISER SURVEY
AD BUYING TOOLS USED IN PAST YEAR
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q8: An ad buying tool is a programmatic advertising platform that allows advertisers and media buying agencies to bid automatically on display ad inventory from a wide range of publishers. Some ad buying tools can also be used to buy video and search ad inventory. Ad buying tools include demand side platforms, or "DSPs." Which of the following ad buying tools, if any, have you and/or your business unit/team used during the past year for programmatic display advertising?

		Total Respondents		$500K – $15M Ad Spend		> Than $15M Ad Spend	
	Ad Buying Tool	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Google Ads	305	67%	164	67%	141	67%
[2]	Google DV360	193	43%	106	43%	87	42%
[3]	Amazon DSP	159	35%	83	34%	76	36%
[4]	Adobe Advertising Cloud	98	22%	47	19%	51	24%
[5]	The Trade Desk DSP	90	20%	36	15%	54	26%
[6]	Yahoo DSP (formerly Verizon Media DSP)	63	14%	26	11%	37	18%
[7]	Criteo	54	12%	20	8%	34	16%
[8]	Taboola	36	8%	19	8%	17	8%
[9]	StackAdapt	32	7%	20	8%	12	6%
[10]	Adform	29	6%	11	5%	18	9%
[11]	Outbrain	28	6%	10	4%	18	9%
[12]	MediaMath DSP	26	6%	10	4%	16	8%
[13]	Xandr Invest	26	6%	12	5%	14	7%
[14]	Zeta Global	23	5%	5	2%	18	9%
[15]	Quantcast	22	5%	11	5%	11	5%
[16]	Amobee	21	5%	6	2%	15	7%
[17]	Simpli.fi	20	4%	7	3%	13	6%
[18]	Illumin (formerly AcuityAds)	15	3%	7	3%	8	4%
[19]	Basis by Centro	14	3%	7	3%	7	3%
[20]	Adelphic	13	3%	7	3%	6	3%
[21]	Beeswax	8	2%	5	2%	3	1%
[22]	Ad Step Technologies	-	-	-	-	-	-
[23]	Quorexx	-	-	-	-	-	-
[24]	Other	10	2%	7	3%	3	1%
[25]	Don't know / Unsure	5	1%	1	0%	4	2%
[26]	Total Shown Question	453	100%	244	100%	209	100%

APPENDIX EXHIBIT 20

HIGHER-SPEND ADVERTISER SURVEY
AD BUYING TOOLS USED IN PAST YEAR
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Notes & Sources:
From Higher-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for "Other" and "Don't know / Unsure."
Respondents with annual ad spend of less than $500K or who selected "Don't know / Unsure" in QS10 were screened out of the survey.
Percentages do not add up to 100% because respondents can select multiple options.

APPENDIX EXHIBIT 21

HIGHER-SPEND ADVERTISER SURVEY
NUMBER OF AD BUYING TOOLS USED IN PAST YEAR
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q8: An ad buying tool is a programmatic advertising platform that allows advertisers and media buying agencies to bid automatically on display ad inventory from a wide range of publishers. Some ad buying tools can also be used to buy video and search ad inventory. Ad buying tools include demand side platforms, or "DSPs." Which of the following ad buying tools, if any, have you and/or your business unit/team used during the past year for programmatic display advertising?

	Number of Ad Buying Tools Selected	Total Respondents		$500K – $15M Ad Spend		> Than $15M Ad Spend	
		#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Zero	-	-	-	-	-	-
[2]	One	113	25%	75	31%	38	18%
[3]	More Than One	335	74%	168	69%	167	80%
[4]	Two	126	28%	66	27%	60	29%
[5]	Three	88	19%	50	20%	38	18%
[6]	Four or More	121	27%	52	21%	69	33%
[7]	Don't know / Unsure	5	1%	1	0%	4	2%
[8]	Total Shown Question	453	100%	244	100%	209	100%
[9]	Average # of Ad Buying Tools Selected	2.9		2.6		3.2	

Notes & Sources:
From Higher-Spend Advertiser Survey.
Respondents with annual ad spend of less than $500K or who selected "Don't know / Unsure" in QS10 were screened out of the survey.
[9] Calculated as the average number of ad buying tools selected by respondents. Excludes respondents who selected "Don't know / Unsure."

APPENDIX EXHIBIT 22

HIGHER-SPEND ADVERTISER SURVEY
USE OF GOOGLE AD BUYING TOOLS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q8: An ad buying tool is a programmatic advertising platform that allows advertisers and media buying agencies to automatically on display ad inventory from a wide range of publishers. Some ad buying tools can also be used to buy video and search ad inventory. Ad buying tools include demand side platforms, or “DSPs.” Which of the following ad buying tools, if any, have you and/or your business unit/team used during the past year for programmatic display advertising?

		Total Respondents		$500K – $15M Ad Spend		> Than $15M Ad Spend	
	Ad Buying Tool(s)	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Neither Google Ads nor Google DV360	100	22%	57	23%	43	21%
[2]	At least one of Google Ads and Google DV360	348	77%	186	76%	162	78%
[3]	Google Ads Only	155	34%	80	33%	75	36%
[4]	Google DV360 Only	43	9%	22	9%	21	10%
[5]	Both Google Ads and Google DV360	150	33%	84	34%	66	32%
[6]	Don’t know / Unsure	5	1%	1	0%	4	2%
[7]	Total Shown Question	453	100%	244	100%	209	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.
Respondents with annual ad spend of less than $500K or who selected “Don’t know / Unsure” in QS10 were screened out of the survey.

APPENDIX EXHIBIT 23

HIGHER-SPEND ADVERTISER SURVEY
GOOGLE USERS
NUMBER OF OTHER AD BUYING TOOLS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q8: An ad buying tool is a programmatic advertising platform that allows advertisers and media buying agencies to bid automatically on display ad inventory from a wide range of publishers. Some ad buying tools can also be used to buy video and search ad inventory. Ad buying tools include demand side platforms, or “DSPs.” Which of the following ad buying tools, if any, have you and/or your business unit/team used during the past year for programmatic display advertising?

		Google Ads Users			Google DV360 Users		
	# of Other Ad Buying Tools (Incl. Google Tools)	Total Respondents	$500K – $15M Ad Spend	> Than $15M Ad Spend	Total Respondents	$500K – $15M Ad Spend	> Than $15M Ad Spend
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	0	41	25	16	15	10	5
[2]	1	97	55	42	44	27	17
[3]	2	67	38	29	43	28	15
[4]	3	42	17	25	36	15	21
[5]	4+	58	29	29	55	26	29
[6]	Total Respondents	305	164	141	193	106	87
[7]	Average # of Other Ad Buying Tools	2.2	2.0	2.4	2.8	2.4	3.3

		Google Ads Users			Google DV360 Users		
	# of Other Ad Buying Tools (Incl. Google Tools)	Total Respondents	$500K – $15M Ad Spend	> Than $15M Ad Spend	Total Respondents	$500K – $15M Ad Spend	> Than $15M Ad Spend
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[8]	0	13%	15%	11%	8%	9%	6%
[9]	1	32%	34%	30%	23%	25%	20%
[10]	2	22%	23%	21%	22%	26%	17%
[11]	3	14%	10%	18%	19%	14%	24%
[12]	4+	19%	18%	21%	28%	25%	33%
[13]	Total Respondents	100%	100%	100%	100%	100%	100%

APPENDIX EXHIBIT 23

HIGHER-SPEND ADVERTISER SURVEY
GOOGLE USERS
NUMBER OF OTHER AD BUYING TOOLS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q8: An ad buying tool is a programmatic advertising platform that allows advertisers and media buying agencies to bid automatically on display ad inventory from a wide range of publishers. Some ad buying tools can also be used to buy video and search ad inventory. Ad buying tools include demand side platforms, or "DSPs." Which of the following ad buying tools, if any, have you and/or your business unit/team used during the past year for programmatic display advertising?

		Google Ads Users			Google DV360 Users		
	# of Non-Google Ad Buying Tools	Total Respondents	$500K – $15M Ad Spend	> Than $15M Ad Spend	Total Respondents	$500K – $15M Ad Spend	> Than $15M Ad Spend
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[14]	0	75	47	28	49	32	17
[15]	1	98	55	43	45	27	18
[16]	2	65	31	34	41	21	20
[17]	3	35	19	16	29	17	12
[18]	4+	32	12	20	29	9	20
[19]	Total Respondents	305	164	141	193	106	87
[20]	Average # of Non-Google Ad Buying Tools	1.7	1.5	2.0	2.0	1.6	2.5

		Google Ads Users			Google DV360 Users		
	# of Non-Google Ad Buying Tools	Total Respondents	$500K – $15M Ad Spend	> Than $15M Ad Spend	Total Respondents	$500K – $15M Ad Spend	> Than $15M Ad Spend
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[21]	0	25%	29%	20%	25%	30%	20%
[22]	1	32%	34%	30%	23%	25%	21%
[23]	2	21%	19%	24%	21%	20%	23%
[24]	3	11%	12%	11%	15%	16%	14%
[25]	4+	10%	7%	14%	15%	8%	23%
[26]	Total Respondents	100%	100%	100%	100%	100%	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.
Respondents with annual ad spend of less than $500K or who selected "Don't know / Unsure" in QS10 were screened out of the survey.
Percentages calculated by dividing the number of people choosing "Google Ads" or "Google DV360" for a given number of selected ad buying tools by the total number of people choosing "Google Ads" or "Google DV360."

APPENDIX EXHIBIT 24

HIGHER-SPEND ADVERTISER SURVEY
USE OF GOOGLE ADS AND OTHER AD BUYING TOOLS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q8: An ad buying tool is a programmatic advertising platform that allows advertisers and media buying agencies to bid automatically on display ad inventory from a wide range of publishers. Some ad buying tools can also be used to buy video and search ad inventory. Ad buying tools include demand side platforms, or "DSPs." Which of the following ad buying tools, if any, have you and/or your business unit/team used during the past year for programmatic display advertising?

	Ad Buying Tool(s)	Total Respondents #	Total Respondents %
	[A]	[B]	[C]
[1]	Google Ads and At Least One Other Ad Buying Tool	264	87%
[2]	*Google Ads and DV360 Only*	*34*	*11%*
[3]	*Google Ads, DV360 and At Least One Non-Google Ad Buying Tool*	*116*	*38%*
[4]	*Google Ads Only and At Least One Non-Google Ad Buying Tool*	*114*	*37%*
[5]	Google Ads and No Other Ad Buying Tool	41	13%
[6]	Total Respondents Using Google Ads	305	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.
Limited to respondents who selected Google Ads in Q8.

APPENDIX EXHIBIT 25

HIGHER-SPEND ADVERTISER SURVEY
OTHER DIGITAL ADVERTISING TYPES USED BY RESPONDENTS WHO USE ONLY GOOGLE ADS FOR PROGRAMMATIC DISPLAY EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

QS12: Which of the following types of digital advertising, if any, have you used in the past year? Please review the description of each advertising type carefully. (Please select all that apply.)

		Respondents Who Use Google Ads and No Other Ad Buying Tools for Programmatic Display		Respondents Who Use Google Ads and No Other Non-Google Ad Buying Tools for Programmatic Display	
	Other Digital Advertising Types Used	#	%	#	%
	[A]	[B]	[C]	[D]	[E]
[1]	Social	19	46%	50	67%
[2]	Search	19	46%	52	69%
[3]	Email	19	46%	44	59%
[4]	Digital Video	13	32%	38	51%
[5]	Direct Display	12	29%	30	40%
[6]	eCommerce Platforms	10	24%	25	33%
[7]	App/In-App	10	24%	21	28%
[8]	Connected TV	2	5%	18	24%
[9]	Digital Audio	2	5%	18	24%
[10]	Other	-	-	-	-
[11]	Total	41	100%	75	100%

Notes & Sources:

From Higher-Spend Advertiser Survey.

Sorted in descending order based on column [B], except for "Other."

[A] Includes the non-programmatic display advertising types respondents selected in QS12 and QS13.

[B]-[C] Limited to respondents who selected Google Ads and no other buying tools (including Google DV360) in Q8.

[D]-[E] Limited to respondents who selected Google Ads and no other Non-Google ad buying tool in Q8.

APPENDIX EXHIBIT 26

HIGHER-SPEND ADVERTISER SURVEY
NUMBER OF OTHER DIGITAL ADVERTISING TYPES USED BY RESPONDENTS WHO USE ONLY GOOGLE ADS FOR PROGRAMMATIC DISPLAY EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

QS12: Which of the following types of digital advertising, if any, have you used in the past year? Please review the description of each advertising type carefully. (Please select all that apply.)

	Number of Other Display Advertising Types Used	Respondents Who Use Google Ads and No Other Ad Buying Tools for Programmatic Display		Respondents Who Use Google Ads and No Other Non-Google Ad Buying Tools for Programmatic Display	
		#	%	#	%
	[A]	[B]	[C]	[D]	[E]
[1]	0	17	41%	18	24%
[2]	1	2	5%	3	4%
[3]	2	1	2%	1	1%
[4]	3	5	12%	8	11%
[5]	4	4	10%	6	8%
[6]	5	6	15%	14	19%
[7]	6	2	5%	10	13%
[8]	7	3	7%	10	13%
[9]	8	1	2%	2	3%
[10]	9	-	0%	3	4%
[11]	Total	41	100%	75	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.
[A] Counts the number of non-programmatic display advertising types respondents selected in QS12 and QS13.
[B]-[C] Limited to respondents who selected Google Ads and no other buying tools (including Google DV360) in Q8.
[D]-[E] Limited to respondents who selected Google Ads and no other Non-Google ad buying tool in Q8.

APPENDIX EXHIBIT 27

HIGHER-SPEND ADVERTISER SURVEY
PROGRAMMATIC DISPLAY ADVERTISING BUDGET SHARE
BY RESPONDENTS WHO USE ONLY GOOGLE ADS FOR PROGRAMMATIC DISPLAY
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q4: What is your best estimate of the share of your business unit/team's digital advertising budget that was used for each of these types of advertising in the past year? Specifically, please allocate 100% across the different types of digital advertising shown below based on the share of your total digital advertising budget spent on each type. The total should add up to 100%.

	% of Budget Allocated to Programmatic Display Advertising	Respondents Who Use Google Ads and No Other Ad Buying Tools for Programmatic Display		Respondents Who Use Google Ads and No Other Non-Google Ad Buying Tools for Programmatic Display	
		#	%	#	%
	[A]	[B]	[C]	[D]	[E]
	% of Digital Advertising Budget				
[1]	0% – 10%	11	27%	24	32%
[2]	10% – 20%	6	15%	17	23%
[3]	20% – 30%	3	7%	11	15%
[4]	30% – 40%	2	5%	3	4%
[5]	40% – 50%	1	2%	1	1%
[6]	50% – 60%	1	2%	1	1%
[7]	60% – 70%	-	0%	-	0%
[8]	70% – 80%	-	0%	-	0%
[9]	80% – 90%	-	0%	-	0%
[10]	90% – 100%	17	41%	18	24%
[11]	Total	41	100%	75	100%
	% of Overall Advertising Budget				
[12]	0% – 10%	15	37%	33	44%
[13]	10% – 20%	4	10%	15	20%
[14]	20% – 30%	1	2%	4	5%
[15]	30% – 40%	4	10%	5	7%
[16]	40% – 50%	7	17%	7	9%
[17]	50% – 60%	3	7%	3	4%
[18]	60% – 70%	4	10%	4	5%
[19]	70% – 80%	3	7%	4	5%
[20]	80% – 90%	-	0%	-	0%
[21]	90% – 100%	-	0%	-	0%
[22]	Total	41	100%	75	100%

APPENDIX EXHIBIT 27

HIGHER-SPEND ADVERTISER SURVEY
PROGRAMMATIC DISPLAY ADVERTISING BUDGET SHARE
BY RESPONDENTS WHO USE ONLY GOOGLE ADS FOR PROGRAMMATIC DISPLAY
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Notes & Sources:

From Higher-Spend Advertiser Survey.

[B]-[C] Limited to respondents who selected Google Ads and no other ad buying tools (including Google DV360) in Q8.

[D]-[E] Limited to respondents who selected Google Ads and no other Non-Google ad buying tool in Q7.

[12]-[21] Calculated as the % of budget allocated to programmatic display in Q4 * the % of budget allocated to online advertising in QS11.

APPENDIX EXHIBIT 28

HIGHER-SPEND ADVERTISER SURVEY
CHANGE IN AD BUYING TOOL USE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q10: Do you and/or your business unit/team expect to use the same number, more, or fewer ad buying tools for programmatic display advertising next year? (Please select only one option.)

	Response Options	#	%
	[A]	[B]	[C]
[1]	More	95	21%
[2]	Fewer	78	17%
[3]	Same Number	259	58%
[4]	Don’t know / Unsure	16	4%
[5]	Total Shown Question	448	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.
Respondents were shown Q10 if they did not select “Don’t know / Unsure” in Q8.

APPENDIX EXHIBIT 29

HIGHER-SPEND ADVERTISER SURVEY
FACTORS CONSIDERED WHEN CHOOSING AD BUYING TOOLS FOR PROGRAMMATIC DISPLAY ADVERTISING
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q12: Which of the following factors, if any, do you and/or your business unit/team consider when deciding to use a particular ad buying tool for programmatic display advertising? (Please select all that apply.)

		Respondents Indicating the Factor was Considered	
	Factor	#	%
	[A]	[B]	[C]
[1]	Ad placement effectiveness	220	49%
[2]	Targeting criteria and capabilities	212	47%
[3]	Audience scale/Reach	207	46%
[4]	Cost	206	46%
[5]	Media optimization of placements during a campaign	197	44%
[6]	Ease of use/User interface	168	38%
[7]	Reporting features	154	34%
[8]	Brand safety/fraud protection	146	33%
[9]	API and integrations	137	31%
[10]	Budget management tools	126	28%
[11]	Forecasting tools	106	24%
[12]	Support	103	23%
[13]	Identity management	85	19%
[14]	Troubleshooting capabilities	77	17%
[15]	Other	4	1%
[16]	Don’t know / Unsure	2	0%
[17]	Total Shown Question	448	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for “Other” and “Don’t know / Unsure.”
Respondents were shown Q12 if they did not select “Don’t know / Unsure” in Q8.
Percentages do not add up to 100% because respondents can select multiple options.

APPENDIX EXHIBIT 30

HIGHER-SPEND ADVERTISER SURVEY
DISCONTINUATION OF AD BUYING TOOL USE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q13: Have you and/or your business unit/team stopped using any ad buying tool(s) for programmatic display advertising in the past year? (Please select only one option.)

	Response Options	#	%
	[A]	[B]	[C]
[1]	Yes	96	21%
[2]	No	322	72%
[3]	Don’t know / Unsure	30	7%
[4]	Total Shown Question	448	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.
Respondents were shown Q13 if they did not select “Don’t know / Unsure” in Q8.

APPENDIX EXHIBIT 31

HIGHER-SPEND ADVERTISER SURVEY
START OF AD BUYING TOOL USE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q15: Have you and/or your business unit/team started using any ad buying tool(s) for programmatic display advertising in the past year? (Please select only one option.)

	Response Options	#	%
	[A]	[B]	[C]
[1]	Yes	173	39%
[2]	No	238	53%
[3]	Don’t know / Unsure	37	8%
[4]	Total Shown Question	448	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.
Respondents were shown Q15 if they did not select “Don’t know / Unsure” in Q8.

APPENDIX EXHIBIT 32

HIGHER-SPEND ADVERTISER SURVEY
PERFORMANCE ASSESSMENT METRICS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q17: Which of the following metrics, if any, are you and/or your business unit/team using to assess the performance of programmatic display ads, direct deals display ads, social media ads, and/or digital video ads? (Please select all that apply in each column.)

		Programmatic Display Ads		Direct Deals Display Ads		Social Media Ads		Digital Video Ads	
	Metric	#	%	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]
[1]	Return on Investment (ROI)	219	48%	113	44%	156	45%	124	42%
[2]	Return on Ad Spend (ROAS)	219	48%	123	48%	179	52%	141	48%
[3]	Conversions	216	48%	104	40%	169	49%	126	43%
[4]	Cost per click (CPC)	216	48%	133	52%	179	52%	122	42%
[5]	Click through rate (CTR)	209	46%	124	48%	197	57%	127	43%
[6]	Cost per impression (CPM)	181	40%	114	44%	153	44%	131	45%
[7]	Impressions	175	39%	108	42%	172	50%	148	51%
[8]	Clicks	171	38%	93	36%	150	43%	112	38%
[9]	Cost per action (CPA)	166	37%	94	36%	148	43%	111	38%
[10]	Other	11	2%	3	1%	10	3%	9	3%
[11]	None of the above	1	0%	1	0%	1	0%	1	0%
[12]	Don’t know / Unsure	1	0%	-	0%	1	0%	2	1%
[13]	Total Shown Question	453	100%	258	100%	347	100%	292	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for “None of the above” and “Don’t know / Unsure.”
Respondents were only asked about each of the above advertising types if they had indicated in QS12 and QS13 that their business unit/team had used those advertising types in the past year.
Percentages do not add up to 100% because respondents can select multiple options.

APPENDIX EXHIBIT 33

HIGHER-SPEND ADVERTISER SURVEY
RANKING OF PERFORMANCE ASSESSMENT METRICS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q18: You indicated that you use the following metrics to assess the performance of programmatic display ads for the client you spend the most time on. Please rank these metrics in terms of how important they are to accurately assessing the performance of programmatic display ads, with 1 being the most important and [NUMBER OF MEASURES SELECTED IN Q16] being the least important. (Please rank the following metrics, or select "Don't know / Unsure".)

		Respondents Ranking Metric As Most Important		Respondents Ranking Metric Among the Top 3 Most Important	
	Metric	#	%	#	%
	[A]	[B]	[C]	[D]	[E]
[1]	Return on Investment (ROI)	98	22%	180	40%
[2]	Return on Ad Spend (ROAS)	81	18%	180	40%
[3]	Conversions	67	15%	155	34%
[4]	Cost per click (CPC)	50	11%	126	28%
[5]	Cost per action (CPA)	42	9%	106	24%
[6]	Click through rate (CTR)	35	8%	116	26%
[7]	Clicks	29	6%	82	18%
[8]	Cost per impression (CPM)	27	6%	94	21%
[9]	Impressions	21	5%	75	17%
[10]	Other	1	0%	4	1%
[11]	Total	451	100%	451	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for "Other."
Respondents are only shown Q18 if they indicate that they used more than one metric to assess the performance of programmatic display ads in Q17. Respondents who selected only one metric in Q17 are assumed to have that metric ranked as most important.
Total includes respondents who ranked metrics in Q18 or selected only one metric in Q17.
0 (0% of respondents who selected at least one metric to assess the performance of programmatic display ads) respondents selected "Don't know / Unsure."

APPENDIX EXHIBIT 34

HIGHER-SPEND ADVERTISER SURVEY
FREQUENCY OF PERFORMANCE ASSESSMENT
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q19: How often, if at all, do you and/or your business unit/team measure or assess the performance of your programmatic display advertising? (Please select only one option.)

If you are using an ad agency and they are responsible for measuring or assessing performance of your programmatic display advertising, please indicate how often you receive information about the performance of your programmatic display advertising from the agency.

	Frequency	#	%
	[A]	[B]	[C]
[1]	Daily	56	12%
[2]	Weekly	165	36%
[3]	Monthly	130	29%
[4]	Quarterly	83	18%
[5]	Annually	16	4%
[6]	Don’t know / Unsure	3	1%
[7]	Total Shown Question	453	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.

APPENDIX EXHIBIT 35

HIGHER-SPEND ADVERTISER SURVEY
EXPERIMENTS ON PROGRAMMATIC DISPLAY ADS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q20: In the past year, have you and/or your business unit/team run any experiments or test & learn initiatives on your programmatic display ads? (Please select only one option.)

	Response Options	#	%
	[A]	[B]	[C]
[1]	Yes	260	57%
[2]	No	174	38%
[3]	Don’t know / Unsure	19	4%
[4]	Total Shown Question	453	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.

APPENDIX EXHIBIT 36

HIGHER-SPEND ADVERTISER SURVEY
TYPES OF EXPERIMENTS ON PROGRAMMATIC DISPLAY ADS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q21: Which of the following types of experiments or test & learn initiatives, if any, have you and/or your business unit/team run in the past year on your programmatic display ads?

	Experiment Type	#	%
	[A]	[B]	[C]
[1]	Creatives	154	59%
[2]	Audiences	143	55%
[3]	ROI/ROAS	128	49%
[4]	Bid strategies	125	48%
[5]	Ad buying tool performance	118	45%
[6]	Publishers	73	28%
[7]	Other	4	2%
[8]	Don’t know / Unsure	-	0%
[9]	Total Shown Question	260	100%

Notes & Sources:
From Higher-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for “Other” and “Don’t know / Unsure.”
Percentages do not add up to 100% because respondents can select multiple options.
Respondents were only shown Q21 if they indicated in Q20 that they had conducted experiments or test & learn initiatives on their programmatic display ads in the past year.

APPENDIX EXHIBIT 37

LOWER-SPEND ADVERTISER SURVEY
RESPONSE STATISTICS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

	Status	#	%
[1]	**Invited to Complete Survey**	**2,268**	**100%**
[2]	**Clicked on Survey Link**	**1,067**	**100%**
[3]	**Screened Out of Survey**	**623**	**58%**
[4]	*CAPTCHA*	*6*	*1%*
[5]	*Age*	*9*	*1%*
[6]	*State*	*2*	*0%*
[7]	*Job Responsibilities*	*171*	*16%*
[8]	*Not Employed by a Products/Services Business*	*178*	*17%*
[9]	*Annual Advertising Spend Above $500K*	*149*	*14%*
[10]	*No Digital Advertising Spend*	*3*	*0%*
[11]	*Did Not Use Display Advertising*	*94*	*9%*
[12]	*Not Involved in Decision Making Roles for Display Advertising*	*4*	*0%*
[13]	*Failed Attention Check*	*7*	*1%*
[14]	*Overquota Respondents*	*-*	*0%*
[15]	**Self-Termination**	**42**	**4%**
[16]	**Completed the Survey**	**402**	**100%**
[17]	**Removed from Sample**	**100**	**25%**
[18]	*Slowpokes and Speeders*	*5*	*1%*
[19]	*Asked to be Excluded*	*95*	*24%*
[20]	**Analytical Sample**	**302**	**100%**
[21]	Selected a Decoy Option	59	20%
[22]	Analytical Sample (Excluding Respondents Selecting a Decoy Option)	243	80%
[23]	*Respondents with Less Than $50K Annual Ad Spend*	*138*	*100%*
[24]	Respondents with Less Than $50K Annual Ad Spend Selecting a Decoy	21	15%
[25]	Respondents with Less Than $50K Annual Ad Spend Not Selecting a Decoy	117	85%
[26]	*Respondents with $50K – $500K Annual Ad Spend*	*164*	*100%*
[27]	Respondents with $50K – $500K Annual Ad Spend Selecting a Decoy	38	23%
[28]	Respondents with $50K – $500K Annual Ad Spend Not Selecting a Decoy	126	77%

APPENDIX EXHIBIT 37

LOWER-SPEND ADVERTISER SURVEY
RESPONSE STATISTICS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Notes & Sources:

From Lower-Spend Advertiser Survey.

[4] Respondents who failed the CAPTCHA three times were screened out of the study.

[5] Respondents who selected "Under 18" or "Prefer not to answer" in QS3 were screened out of the study.

[6] Respondents who selected "Other" or "Don't know / Unsure" in QS5 were screened out of the study.

[7] Respondents who indicated in QS6 that, as part of their job responsibilities, they do not have any involvement with "Advertising or Marketing" were screened out of the study.

[8] Respondents who indicated in QS7 that they did not work for a "Products/Service Business" were screened out of the study.

[9] Respondents who indicated in QS10 that their company spent $500,000 or more on all advertising in the last 12 months or selected "Don't know / Unsure" were screened out of the study.

[10] Respondents who indicated in QS11 that the percentage of their total advertising budget spent on digital (online) advertising was zero were screened out of the study.

[11] Respondents who did not indicate in QS12 that they used display advertising in the past year were screened out of the study.

[12] Respondents who did not select "I determine overall strategies and/or budgets for digital display," "I determine which tools and/or platforms to use for digital display," "I regularly manage digital display campaigns," or "I oversee a team/individuals that use(s) self-serve ad platforms to manage digital display campaigns" in QS13 were screened out of the study.

[13] Respondents who did not select "Somewhat likely" in QS14 were screened out of the study.

[14] Respondents were terminated due to entering the survey after it had been closed for sampling.

[15] Respondents who only completed part of the survey.

[18] Respondents who took less than 100 seconds (1.67 minutes) or more than 10,800 seconds (3 hours) to complete the survey were removed from the analysis.

[19] Respondents were asked if they are willing to participate in this survey after completing the questionnaire. Respondents who selected "Exclude my responses" in QF1 were removed from the data by the panel vendor.

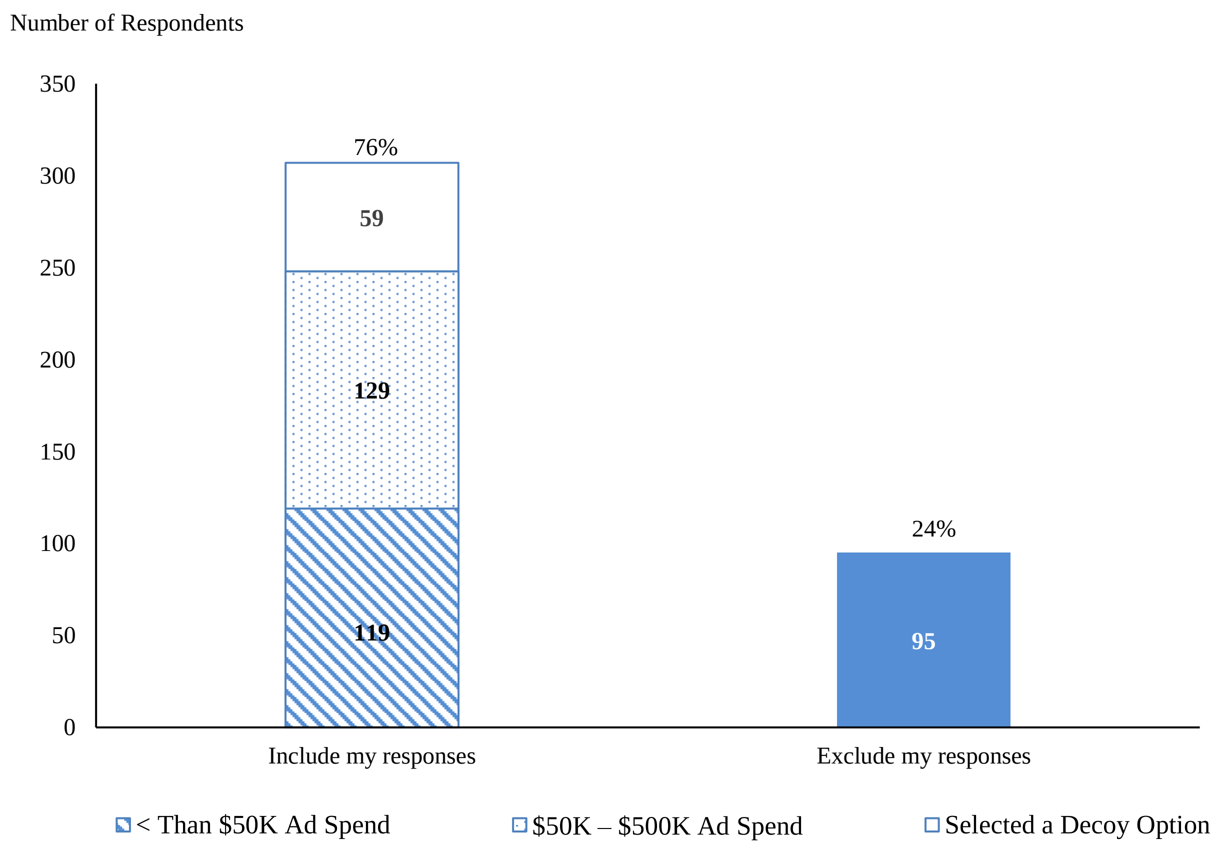
[21] Respondents who selected one or more decoy options in the survey were removed from the analysis. These respondents selected "Ad Step Technologies" in Q4 and/or "FriendLinx" in Q5.

[22] These respondents were used in the analysis.

APPENDIX EXHIBIT 38

LOWER-SPEND ADVERTISER SURVEY
SURVEY PARTICIPATION PREFERENCE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

QF1: This survey is being conducted by consultants that have been retained on behalf of Google in connection with pending antitrust lawsuits in which the plaintiffs allege that Google engaged in anticompetitive conduct related to digital advertising. If you are willing to participate in this survey, please click “Include my responses” below. As a reminder, your responses will be kept anonymous and will be analyzed as part of a larger sample of responses. If you do not want to participate in this survey, please click “Exclude my responses” below.



APPENDIX EXHIBIT 38

LOWER-SPEND ADVERTISER SURVEY
SURVEY PARTICIPATION PREFERENCE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Notes & Sources:
From Lower-Spend Advertiser Survey.
Includes respondents who completed the survey.
Respondents who indicated that they wanted their responses excluded from the survey were removed from the data by the panel vendor.
Information about annual ad spend for the 95 respondents who selected to exclude their responses is not available.

APPENDIX EXHIBIT 39

LOWER-SPEND ADVERTISER SURVEY
RESPONDENT DEMOGRAPHICS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

		Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
		#	%	#	%	#	%
	Age	[A]	[B]	[C]	[D]	[E]	[F]
[1]	18 - 34	44	18%	19	16%	25	20%
[2]	35 - 49	177	73%	91	78%	86	68%
[3]	50 - 64	22	9%	7	6%	15	12%
[4]	65 or above	-	0%	-	0%	-	0%
[5]	Total	243	100%	117	100%	126	100%
	Gender						
[6]	Female	41	17%	10	9%	31	25%
[7]	Male	202	83%	107	91%	95	75%
[8]	Other	-	0%	-	0%	-	0%
[9]	Prefer not to answer	-	0%	-	0%	-	0%
[10]	Total	243	100%	117	100%	126	100%

Source:
From Lower-Spend Advertiser Survey.

APPENDIX EXHIBIT 40

LOWER-SPEND ADVERTISER SURVEY
MARKET SECTORS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

QS8: Which of the following, if any, best characterizes the market sector/industry your company is in? (Please select only one option.)

		Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
	Market Sector / Industry	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Advertising or Marketing	106	44%	46	39%	60	48%
[2]	Retail (including Ecommerce)	34	14%	23	20%	11	9%
[3]	B2B/Services for Businesses	18	7%	6	5%	12	10%
[4]	Apparel/Fashion	13	5%	7	6%	6	5%
[5]	Food and Beverage	10	4%	7	6%	3	2%
[6]	Health and Beauty Products	8	3%	3	3%	5	4%
[7]	Financial Products/Services for Consumers (including Fintech)	7	3%	3	3%	4	3%
[8]	Media and Entertainment	6	2%	1	1%	5	4%
[9]	Restaurants	5	2%	4	3%	1	1%
[10]	Education	5	2%	2	2%	3	2%
[11]	Health Care or Medical Services	5	2%	4	3%	1	1%
[12]	Consumer Electronics	4	2%	1	1%	3	2%
[13]	Telecommunications	4	2%	1	1%	3	2%
[14]	Home Products/Appliances	3	1%	3	3%	-	-
[15]	Automotive	3	1%	2	2%	1	1%
[16]	Pharmaceuticals and Remedies (Rx or OTC)	2	1%	-	-	2	2%
[17]	Travel and Hospitality	1	0%	-	-	1	1%
[18]	Non-Profit	-	-	-	-	-	-
[19]	Government	-	-	-	-	-	-
[20]	Other	9	4%	4	3%	5	4%
[20]	Total	243	100%	117	100%	126	100%

Notes & Sources:
From Lower-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for "Other."

APPENDIX EXHIBIT 41

LOWER-SPEND ADVERTISER SURVEY
JOB TITLES
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

QS9: Which of the following best characterizes your current job title/level? (Please select only one option.)

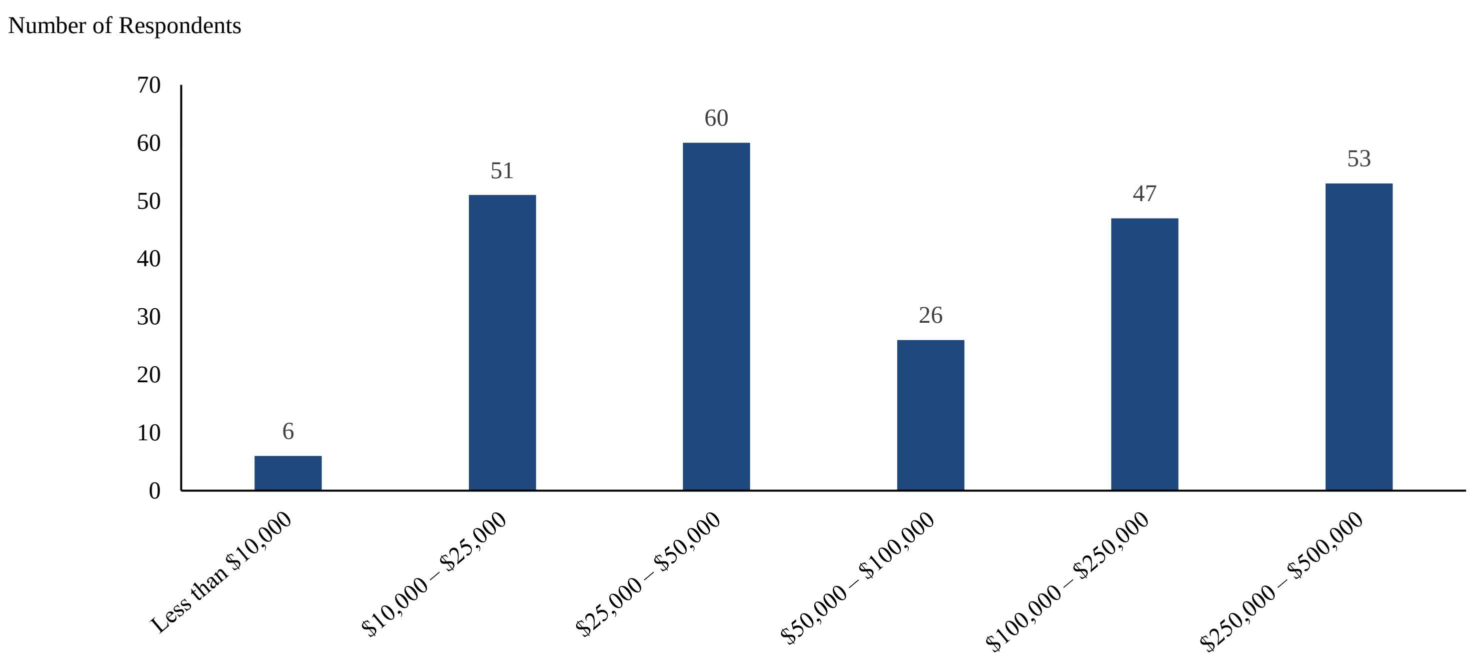
		Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
	Job Title / Level	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	C-Level (CEO, COO, CMO, etc.)	88	36%	45	38%	43	26%
[2]	Director	58	24%	28	24%	30	18%
[3]	Vice President, SVP, EVP, President, etc.	50	21%	23	20%	27	16%
[4]	Manager	29	12%	14	12%	15	9%
[5]	Supervisor/Department Head/Group Manager	8	3%	3	3%	5	3%
[6]	Associate	3	1%	-	0%	3	2%
[7]	Buyer	2	1%	1	1%	1	1%
[8]	Planner	2	1%	1	1%	1	1%
[9]	Strategist	1	0%	1	1%	-	0%
[10]	Analyst	-	-	-	0%	-	0%
[11]	Other	2	1%	1	1%	1	1%
[12]	Total	243	100%	117	100%	164	100%

Notes & Sources:
From Lower-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for "Other."

APPENDIX EXHIBIT 42

LOWER-SPEND ADVERTISER SURVEY
ANNUAL AD SPEND
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

QS10: Approximately how much did your company spend in the last 12 months on all advertising, including all digital types (e.g., display, video, audio, social) plus all nondigital types (e.g., TV types, print, OOH, etc.)? (Please select only one option.)

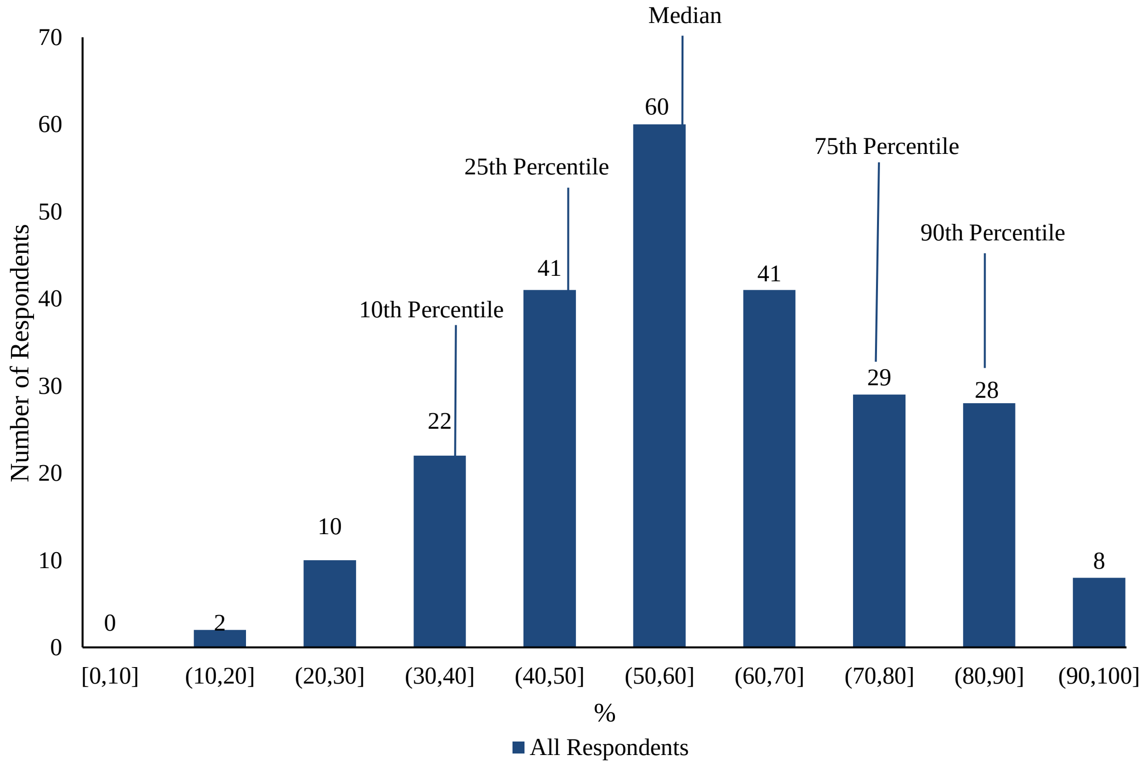


Notes & Sources:
From Lower-Spend Advertiser Survey.

APPENDIX EXHIBIT 43

LOWER-SPEND ADVERTISER SURVEY
PERCENT OF BUDGET SPENT ON DIGITAL ADVERTISING
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

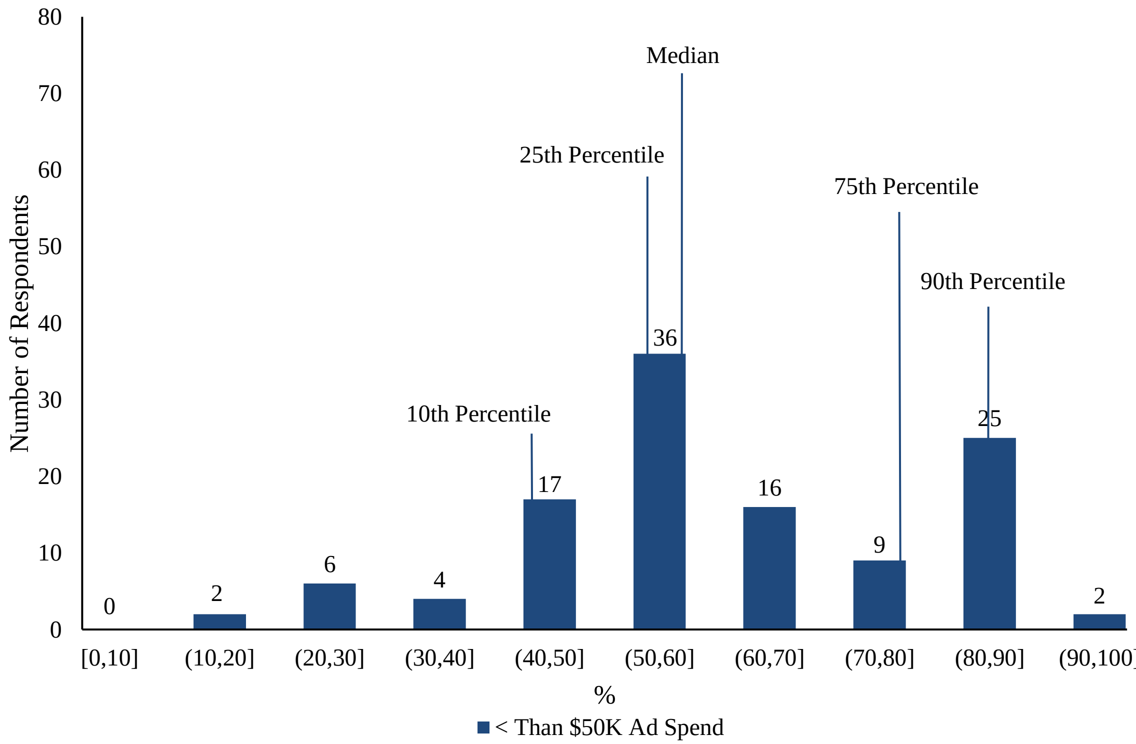
QS11: Please think about your total advertising budget. In the past year, what percentage of your total advertising budget was used for digital (online) advertising, as opposed to offline advertising. Please give your best estimate.



APPENDIX EXHIBIT 43

LOWER-SPEND ADVERTISER SURVEY
PERCENT OF BUDGET SPENT ON DIGITAL ADVERTISING
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

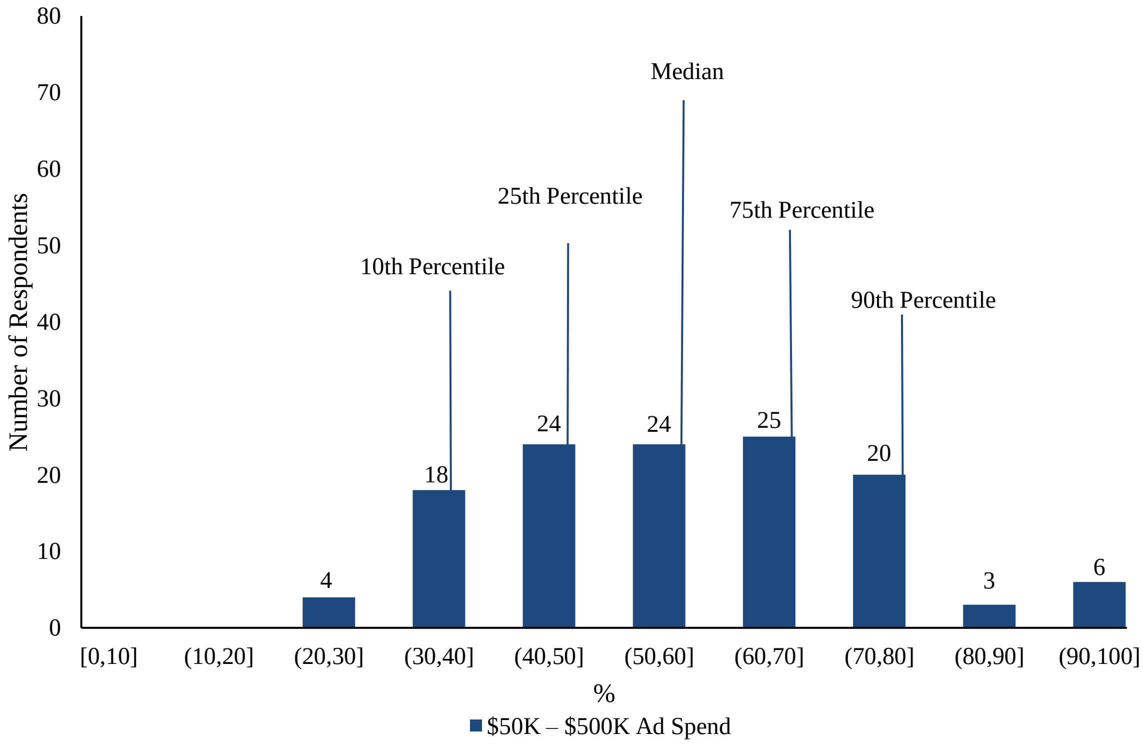
QS11: Please think about your total advertising budget. In the past year, what percentage of your total advertising budget was used for digital (online) advertising, as opposed to offline advertising. Please give your best estimate.



APPENDIX EXHIBIT 43

LOWER-SPEND ADVERTISER SURVEY
PERCENT OF BUDGET SPENT ON DIGITAL ADVERTISING
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

QS11: Please think about your total advertising budget. In the past year, what percentage of your total advertising budget was used for digital (online) advertising, as opposed to offline advertising. Please give your best estimate.



APPENDIX EXHIBIT 43

LOWER-SPEND ADVERTISER SURVEY
PERCENT OF BUDGET SPENT ON DIGITAL ADVERTISING
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Notes & Sources:
From Lower-Spend Advertiser Survey.
Respondents who entered zero for digital (online) advertising were screened out of the survey.
2 respondents selected "Don't know / Unsure."

APPENDIX EXHIBIT 44

LOWER-SPEND ADVERTISER SURVEY
TYPES OF DIGITAL ADVERTISING USED
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

QS12: Which of the following types of digital advertising, if any, have you used in the past year? Please review the description of each advertising type carefully. (Please select all that apply.)

		Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
	Advertising Type	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Display	243	100%	117	100%	126	100%
[2]	Social	161	66%	80	68%	81	64%
[3]	Search	151	62%	74	63%	77	61%
[4]	Digital Video	119	49%	50	43%	69	55%
[5]	Email	107	44%	39	33%	68	54%
[6]	Digital Audio	93	38%	44	38%	49	39%
[7]	eCommerce Platforms	90	37%	38	32%	52	41%
[8]	App/In-App	83	34%	41	35%	42	33%
[9]	Connected TV	79	33%	31	26%	48	38%
[10]	Other	1	0%	-	0%	1	1%
[11]	Total	243	100%	117	100%	126	100%

<u>Notes & Sources</u>:
From Lower-Spend Advertiser Survey.
Respondents who did not select “Display” were screened out of the survey.
Percentages do not add up to 100% because respondents can select multiple options.
Sorted in descending order based on column [B].

APPENDIX EXHIBIT 45

LOWER-SPEND ADVERTISER SURVEY
NUMBER OF TYPES OF DIGITAL ADVERTISING USED
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

QS12: Which of the following types of digital advertising, if any, have you used in the past year? Please review the description of each advertising type carefully. (Please select all that apply.)

		Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
	Number of Types Selected	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	1	40	16%	26	22%	14	11%
[2]	2	11	5%	5	4%	6	5%
[3]	3	50	21%	30	26%	20	16%
[4]	4	20	8%	6	5%	14	11%
[5]	5	34	14%	9	8%	25	20%
[6]	6	23	9%	8	7%	15	12%
[7]	7	23	9%	11	9%	12	10%
[8]	8	12	5%	4	3%	8	6%
[9]	9	30	12%	18	15%	12	10%
[10]	10	-	0%	-	0%	-	0%
[11]	Total	243	100%	117	100%	126	100%

Notes & Sources:
From Lower-Spend Advertiser Survey.

APPENDIX EXHIBIT 46

LOWER-SPEND ADVERTISER SURVEY
USE OF AD AGENCY AND/OR CONSULTANT
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q2: Do you or do you not use an ad agency and/or consultant for digital advertising? (Please select only one option.)

		Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
	Response Options	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Yes, I use an ad agency and/or consultant.	155	64%	77	66%	78	62%
[2]	No, I don’t use an ad agency and/or consultant.	88	36%	40	34%	48	38%
[3]	Don’t know / Unsure	-	0%	-	0%	-	0%
[4]	Total Shown Question	243	100%	117	100%	126	100%

Notes & Sources:
From Lower-Spend Advertiser Survey.

APPENDIX EXHIBIT 47

LOWER-SPEND ADVERTISER SURVEY
PURPOSE OF AD AGENCY USE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q3: For which, if any, of the following do you use an ad agency and/or consultant? (Please select all that apply.)

		Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
	Response Options	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Media/marketing strategies	93	60%	42	55%	51	65%
[2]	Implementation of advertising (e.g., placing bids, interacting with DSPs)	83	54%	41	53%	42	54%
[3]	Tracking advertising performance	73	47%	34	44%	39	50%
[4]	Content and/or creatives	72	46%	35	45%	37	47%
[5]	Running advertising tests/experiments	61	39%	30	39%	31	40%
[6]	Customer research	56	36%	30	39%	26	33%
[7]	Budgeting decisions	49	32%	20	26%	29	37%
[8]	Allocating advertising funds across advertising types	42	27%	15	19%	27	35%
[9]	Consulting services	40	26%	10	13%	30	38%
[10]	Inventory access	28	18%	12	16%	16	21%
[11]	Other	-	0%	-	0%	-	0%
[12]	None of the above	-	0%	-	0%	-	0%
[13]	Don’t know / Unsure	-	0%	-	0%	-	0%
[14]	Total Shown Question	155	100%	77	100%	78	100%

Notes & Sources:
From Lower-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for “Other,” “None of the above,” and “Don’t know/Unsure.”
Respondents are only shown Q3 if they indicated in Q2 that they used an ad agency for digital advertising.
Percentages do not add up to 100% because respondents can select multiple options.

APPENDIX EXHIBIT 48

LOWER-SPEND ADVERTISER SURVEY
DIGITAL DISPLAY PLATFORMS USED IN PAST YEAR
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q4: Digital display ads are digital ads made up of text, image, video and/or other multimedia components that typically appear along the top or sides of a website, or sometimes in the middle of other content on a website. Examples of display ad formats include banner ads, animations, and interactive content. Display ads do not include ads placed on social media platforms. Which of the following platforms, if any, have you used during the last 12 months for digital display advertising?

		Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
	Platform	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Google Ads	155	64%	74	63%	81	64%
[2]	Amazon DSP	119	49%	60	51%	59	47%
[3]	Google DV360	82	34%	33	28%	49	39%
[4]	Adobe Advertising Cloud	62	26%	20	17%	42	33%
[5]	Yahoo DSP (formerly Verizon Media DSP)	38	16%	16	14%	22	17%
[6]	MediaMath DSP	34	14%	14	12%	20	16%
[7]	The Trade Desk DSP	30	12%	12	10%	18	14%
[8]	Quantcast	21	9%	5	4%	16	13%
[9]	Criteo	18	7%	8	7%	10	8%
[10]	Amobee	18	7%	7	6%	11	9%
[11]	Ad Step Technologies	-	-	-	-	-	-
[12]	Other	4	2%	3	3%	1	1%
[13]	Don't know / Unsure	3	1%	1	1%	2	2%
[14]	Total Shown Question	243	100%	117	100%	126	100%

Notes & Sources:
From Lower-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for "Other" and "Don't know/Unsure."
Percentages do not add up to 100% because respondents can select multiple options.

APPENDIX EXHIBIT 49

LOWER-SPEND ADVERTISER SURVEY
NUMBER OF DIGITAL DISPLAY PLATFORMS USED IN PAST YEAR
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q4: Digital display ads are digital ads made up of text, image, video and/or other multimedia components that typically appear along the top or sides of a website, or sometimes in the middle of other content on a website. Examples of display ad formats include banner ads, animations, and interactive content. Display ads do not include ads placed on social media platforms. Which of the following platforms, if any, have you used during the last 12 months for digital display advertising?

	Number of Platforms Selected	Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
		#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Zero	-	0%	-	0%	-	0%
[2]	One	52	21%	25	21%	27	21%
[3]	More Than One	188	77%	91	78%	97	77%
[4]	Two	97	40%	60	51%	37	29%
[5]	Three	50	21%	21	18%	29	23%
[6]	Four or More	41	17%	10	9%	31	25%
[7]	Don’t know/Unsure	3	1%	1	1%	2	2%
[8]	Total Shown Question	243	100%	117	100%	126	100%
[9]	Average # of Display Platforms Selected	2.4		2.2		2.7	

Notes & Sources:
From Lower-Spend Advertiser Survey.
[9] Calculated as the average number of display platforms selected by respondents. Excludes respondents who selected “Don’t know/Unsure.”

APPENDIX EXHIBIT 50

LOWER-SPEND ADVERTISER SURVEY
USE OF GOOGLE PLATFORMS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q4: Digital display ads are digital ads made up of text, image, video and/or other multimedia components that typically appear along the top or sides of a website, or sometimes in the middle of other content on a website. Examples of display ad formats include banner ads, animations, and interactive content. Display ads do not include ads placed on social media platforms. Which of the following platforms, if any, have you used during the last 12 months for digital display advertising?

		Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
	Platform(s)	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Neither Google Ads nor Google DV360	61	25%	29	25%	32	25%
[2]	At least one of Google Ads and Google DV360	179	74%	87	74%	92	73%
[3]	Google Ads Only	97	40%	54	46%	43	34%
[4]	Google DV360 Only	24	10%	13	11%	11	9%
[5]	Both Google Ads and Google DV360	58	24%	20	17%	38	30%
[6]	Don’t know / Unsure	3	1%	1	1%	2	2%
[7]	Total Shown Question	243	100%	117	100%	126	100%

Notes & Sources:
From Lower-Spend Advertiser Survey.

APPENDIX EXHIBIT 51

LOWER-SPEND ADVERTISER SURVEY
GOOGLE USERS
NUMBER OF OTHER DISPLAY PLATFORMS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q4: Digital display ads are digital ads made up of text, image, video and/or other multimedia components that typically appear along the top or sides of a website, or sometimes in the middle of other content on a website. Examples of display ad formats include banner ads, animations, and interactive content. Display ads do not include ads placed on social media platforms. Which of the following platforms, if any, have you used during the last 12 months for digital display advertising?

		Google Ads Users			Google DV360 Users		
	# of Other Display Platforms (Inc. Google Tools)	Total Respondents	< Than $50K Ad Spend	$50K – $500K Ad Spend	Total Respondents	< Than $50K Ad Spend	$50K – $500K Ad Spend
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	0	23	12	11	3	3	-
[2]	1	66	40	26	25	11	14
[3]	2	31	13	18	25	11	14
[4]	3	21	6	15	17	5	12
[5]	4+	14	3	11	12	3	9
[6]	Total Respondents	155	74	81	82	33	49
[7]	Average # of Other Platforms	1.6	1.3	1.9	2.2	1.8	2.4

		Google Ads Users			Google DV360 Users		
	# of Other Display Platforms (Inc. Google Tools)	Total Respondents	< Than $50K Ad Spend	$50K – $500K Ad Spend	Total Respondents	< Than $50K Ad Spend	$50K – $500K Ad Spend
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[8]	0	15%	16%	14%	4%	9%	0%
[9]	1	43%	54%	32%	30%	33%	29%
[10]	2	20%	18%	22%	30%	33%	29%
[11]	3	14%	8%	19%	21%	15%	24%
[12]	4+	9%	4%	14%	15%	9%	18%
[13]	Total Respondents	100%	100%	100%	100%	100%	100%

APPENDIX EXHIBIT 51

LOWER-SPEND ADVERTISER SURVEY
GOOGLE USERS
NUMBER OF OTHER DISPLAY PLATFORMS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q4: Digital display ads are digital ads made up of text, image, video and/or other multimedia components that typically appear along the top or sides of a website, or sometimes in the middle of other content on a website. Examples of display ad formats include banner ads, animations, and interactive content. Display ads do not include ads placed on social media platforms. Which of the following platforms, if any, have you used during the last 12 months for digital display advertising?

		Google Ads Users			Google DV360 Users		
	# of Non-Google Platforms	Total Respondents	< Than $50K Ad Spend	$50K – $500K Ad Spend	Total Respondents	< Than $50K Ad Spend	$50K – $500K Ad Spend
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[14]	0	37	16	21	17	7	10
[15]	1	70	44	26	29	15	14
[16]	2	28	10	18	22	8	14
[17]	3	12	3	9	8	2	6
[18]	4+	8	1	7	6	1	5
[19]	Total Respondents	155	74	81	82	33	49
[20]	Average # of Non-Google Platforms	1.3	1.0	1.4	1.5	1.2	1.7

		Google Ads Users			Google DV360 Users		
	# of Non-Google Platforms	Total Respondents	< Than $50K Ad Spend	$50K – $500K Ad Spend	Total Respondents	< Than $50K Ad Spend	$50K – $500K Ad Spend
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[21]	0	24%	22%	26%	21%	21%	20%
[22]	1	45%	59%	32%	35%	45%	29%
[23]	2	18%	14%	22%	27%	24%	29%
[24]	3	8%	4%	11%	10%	6%	12%
[25]	4+	5%	1%	9%	7%	3%	10%
[26]	Total Respondents	100%	100%	100%	100%	100%	100%

Notes & Sources:
From Lower-Spend Advertiser Survey.
Percentages calculated by dividing the number of people choosing “Google Ads” or “Google DV360” for a given number of selected platforms by the total number of people choosing “Google Ads” or “Google DV360.”

APPENDIX EXHIBIT 52

LOWER-SPEND ADVERTISER SURVEY
USE OF GOOGLE ADS AND OTHER DISPLAY PLATFORMS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q4: Digital display ads are digital ads made up of text, image, video and/or other multimedia components that typically website, or sometimes in the middle of other content on a website. Examples of display ad formats include banner ads, animations, and interactive content. Display ads do not include ads placed on social media platforms. Which of the following platforms, if any, have you used during the last 12 months for digital display advertising?

		Total Respondents	
	Display Platform(s)	#	%
	[A]	[B]	[C]
[1]	Google Ads and At Least One Other Display Platform	132	85%
[2]	*Google Ads and DV360 Only*	*14*	*9%*
[3]	*Google Ads, DV360 and At Least One Non-Google Display Platforms*	*44*	*28%*
[4]	*Google Ads Only and At Least One Non-Google Display Platform*	*74*	*48%*
[5]	Google Ads and No Other Display Platform	23	15%
[6]	Total Respondents Using Google Ads	155	100%

Notes & Sources:
From Lower-Spend Advertiser Survey.
Limited to respondents who selected Google Ads in Q4.

APPENDIX EXHIBIT 53

LOWER-SPEND ADVERTISER SURVEY
OTHER DIGITAL ADVERTISING TYPES USED BY RESPONDENTS WHO USE ONLY GOOGLE ADS FOR DISPLAY
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

QS12: Which of the following types of digital advertising, if any, have you used in the past year? Please review the description of each advertising type carefully. (Please select all that apply.)

		Respondents Who Use Google Ads and No Other Display Platforms					
	Other Digital Advertising Types Used	Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
		#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Social	11	48%	6	50%	5	45%
[2]	Search	9	39%	4	33%	5	45%
[3]	Email	6	26%	2	17%	4	36%
[4]	Digital Video	5	22%	2	17%	3	27%
[5]	Connected TV	2	9%	-	0%	2	18%
[6]	Digital Audio	1	4%	1	8%	-	0%
[7]	eCommerce Platforms	-	0%	-	0%	-	0%
[8]	App/In-App	-	0%	-	0%	-	0%
[9]	Other	-	0%	-	0%	-	0%
[10]	Total Shown Question	23	100%	12	100%	11	100%

		Respondents Who Use Google Ads and No Other Non-Google Display Platforms					
	Other Digital Advertising Types Used	Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
		#	%	#	%	#	%
	[A]	[H]	[I]	[J]	[K]	[L]	[M]
[1]	Social	21	57%	9	56%	12	57%
[2]	Search	20	54%	7	44%	13	62%
[3]	Email	16	43%	5	31%	11	52%
[4]	Digital Video	15	41%	6	38%	9	43%
[5]	Connected TV	7	19%	2	13%	5	24%
[6]	Digital Audio	7	19%	3	19%	4	19%
[7]	eCommerce Platforms	5	14%	3	19%	2	10%
[8]	App/In-App	7	19%	4	25%	3	14%
[9]	Other	-	0%	-	0%	-	0%
[10]	Total Shown Question	37	100%	16	100%	21	100%

APPENDIX EXHIBIT 53

LOWER-SPEND ADVERTISER SURVEY
OTHER DIGITAL ADVERTISING TYPES USED BY RESPONDENTS
WHO USE ONLY GOOGLE ADS FOR DISPLAY
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Notes & Sources:

From Lower-Spend Advertiser Survey.

Sorted in descending order based on column [B], except for "Other."

[A] Non-display advertising types respondents selected in QS12.

[B]-[G] Limited to respondents who selected Google Ads and no other display platforms.

[H]-[M] Limited to respondents who selected Google Ads and no other non-Google display platforms.

APPENDIX EXHIBIT 54

LOWER-SPEND ADVERTISER SURVEY
NUMBER OF OTHER DIGITAL ADVERTISING TYPES USED AMONG RESPONDENTS WHO USE ONLY GOOGLE ADS FOR DISPLAY
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

QS12: Which of the following types of digital advertising, if any, have you used in the past year? Please review the description of each advertising type carefully. (Please select all that apply.)

		Respondents Who Use Google Ads and No Other Display Platforms					
	Number of Other Digital	Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
	Advertising Types Used	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	0	10	43%	6	50%	4	36%
[2]	1	2	9%	1	8%	1	9%
[3]	2	4	17%	2	17%	2	18%
[4]	3	4	17%	2	17%	2	18%
[5]	4	3	13%	1	8%	2	18%
[6]	5	-	0%	-	0%	-	0%
[7]	6	-	0%	-	0%	-	0%
[8]	7	-	0%	-	0%	-	0%
[9]	8	-	0%	-	0%	-	0%
[10]	Total Shown Question	23	100%	12	100%	11	100%

		Respondents Who Use Google Ads and No Other Non-Google Display Platforms					
	Number of Other Digital	Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
	Advertising Types Used	#	%	#	%	#	%
	[A]	[H]	[I]	[J]	[K]	[L]	[M]
[1]	0	10	27%	6	38%	4	19%
[2]	1	2	5%	1	6%	1	5%
[3]	2	7	19%	2	13%	5	24%
[4]	3	5	14%	2	13%	3	14%
[5]	4	6	16%	2	13%	4	19%
[6]	5	2	5%	-	0%	2	10%
[7]	6	3	8%	2	13%	1	5%
[8]	7	1	3%	-	0%	1	5%
[9]	8	1	3%	1	6%	-	0%
[10]	Total Shown Question	37	100%	16	100%	21	100%

APPENDIX EXHIBIT 54

LOWER-SPEND ADVERTISER SURVEY
NUMBER OF OTHER DIGITAL ADVERTISING TYPES USED AMONG RESPONDENTS WHO USE ONLY GOOGLE ADS FOR DISPLAY
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Notes & Sources:
From Lower-Spend Advertiser Survey.
[A] Counts the number of non-display advertising types respondents selected in QS12.
[B]-[G] Limited to respondents who selected Google Ads and no other display platforms.
[H]-[M] Limited to respondents who selected Google Ads and no other non-Google display platforms.

APPENDIX EXHIBIT 55

LOWER-SPEND ADVERTISER SURVEY
DIGITAL ADVERTISING BUDGET SHARE BY RESPONDENTS WHO USE ONLY GOOGLE ADS FOR DISPLAY
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q8: Previously, you mentioned that you have used the following types of digital advertising in the past year. What is your best estimate of the share of your digital advertising spending that was used for each of these types of advertising in the past year? Specifically, please allocate 100% across the different types of digital advertising shown below based on the share of your total digital advertising spending spent on each type. The total should add up to 100%.

		Respondents Who Use Google Ads and No Other Display Platforms						Respondents Who Use Google Ads and No Other Non-Google Display Platforms					
	% of Budget Allocated to Display Advertising	Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend		Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
		#	%	#	%	#	%	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]
	% of Digital Advertising Budget												
[1]	0% – 10%	1	4%	1	8%	-	0%	7	19%	3	19%	4	19%
[2]	10% – 20%	3	13%	1	8%	2	18%	5	14%	3	19%	2	10%
[3]	20% – 30%	6	26%	3	25%	3	27%	7	19%	3	19%	4	19%
[4]	30% – 40%	-	0%	-	0%	-	0%	2	5%	-	0%	2	10%
[5]	40% – 50%	2	9%	-	0%	2	18%	3	8%	-	0%	3	14%
[6]	50% – 60%	1	4%	1	8%	-	0%	2	5%	1	6%	1	5%
[7]	60% – 70%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%
[8]	70% – 80%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%
[9]	80% – 90%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%
[10]	90% – 100%	10	43%	6	50%	4	36%	10	27%	6	38%	4	19%
[11]	Don't know / Unsure	-	0%	-	0%	-	0%	1	3%	-	0%	1	5%
[12]	Total	23	100%	12	100%	11	100%	37	100%	16	100%	21	100%
	% of Overall Advertising Budget												
[13]	0% – 10%	3	13%	2	17%	1	9%	9	24%	4	25%	5	24%
[14]	10% – 20%	7	30%	3	25%	4	36%	10	27%	5	31%	5	24%
[15]	20% – 30%	3	13%	1	8%	2	18%	6	16%	1	6%	5	24%
[16]	30% – 40%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%
[17]	40% – 50%	9	39%	6	50%	3	27%	10	27%	6	38%	4	19%
[18]	50% – 60%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%
[19]	60% – 70%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%
[20]	70% – 80%	1	4%	-	0%	1	9%	1	3%	-	0%	1	5%
[21]	80% – 90%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%
[22]	90% – 100%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%
[23]	Don't know / Unsure	-	0%	-	0%	-	0%	1	3%	-	0%	1	5%
[24]	Total	23	100%	12	100%	11	100%	37	100%	16	100%	21	100%

Notes & Sources:

From Lower-Spend Advertiser Survey.

[B]-[G] Limited to respondents who selected Google Ads and no other display platforms.

[H]-[M] Limited to respondents who selected Google Ads and no other non-Google display platforms in Q4.

[13]-[22] Calculated as the % of budget allocated to display in Q8 * the % of budget allocated to online advertising in QS11.

APPENDIX EXHIBIT 56

LOWER-SPEND ADVERTISER SURVEY
SOCIAL MEDIA PLATFORMS USED
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q5: You indicated that you have used social advertising in the past year. Social ads are digital ads placed on social media platforms such as Facebook, Instagram, LinkedIn, Snapchat, and Twitter. Which of the following social media platforms, if any, have you used during the last 12 months for social advertising? (Please select all that apply).

		Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
	Social Media Platform	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Facebook	136	84%	70	88%	66	81%
[2]	Instagram	107	66%	53	66%	54	67%
[3]	LinkedIn	75	47%	30	38%	45	56%
[4]	Twitter	72	45%	32	40%	40	49%
[5]	Tiktok	62	39%	21	26%	41	51%
[6]	Snapchat	54	34%	25	31%	29	36%
[7]	Pinterest	37	23%	12	15%	25	31%
[8]	Reddit	27	17%	10	13%	17	21%
[9]	Tumblr	8	5%	3	4%	5	6%
[10]	FriendLinx	-	0%	-	0%	-	0%
[11]	Other social media platforms	2	1%	1	1%	1	1%
[12]	Don’t know / Unsure	-	0%	-	0%	-	0%
[14]	Total Shown Question	161	100%	80	100%	81	100%

Notes & Sources:
From Lower-Spend Advertiser Survey.
Sorted in descending order based on column Total Respondents, except for “Other,” “None of the above,” and “Don't know/Unsure.”
Percentages do not add up to 100% because respondents can select multiple options.
Respondents were shown Q5 if they indicated that they had used social advertising in the past year in QS12.

APPENDIX EXHIBIT 57

LOWER-SPEND ADVERTISER SURVEY
DIGITAL ADVERTISING BUDGET SHARE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q8: Previously, you mentioned that you have used the following types of digital advertising in the past year. What is your best estimate of the share of your digital advertising spending that was used for each of these types of advertising in the past year? Specifically, please allocate 100% across the different types of digital advertising shown below based on the share of your total digital advertising budget spent on each type. The total should add up to 100%.

		Total Respondents		
	Advertising Type	# of Respondents	Mean	Median
	[A]	[B]	[C]	[D]
[1]	Display	228	36%	25%
[2]	Social	151	15%	10%
[3]	Search	138	13%	10%
[4]	Digital Video	110	9%	0%
[5]	Email	95	6%	0%
[6]	eCommerce Platforms	83	6%	0%
[7]	Digital Audio	80	5%	0%
[8]	App/In-app	72	5%	0%
[9]	Connected TV	71	5%	0%
[10]	Other	-	0%	0%
[11]	Don’t know / Unsure	5	0%	0%
[12]	Total Shown Question	243		

		< Than $50K Ad Spend		
	Advertising Type	# of Respondents	Mean	Median
	[A]	[E]	[F]	[G]
[1]	Display	105	40%	30%
[2]	Social	72	17%	11%
[3]	Search	64	13%	10%
[4]	Digital Video	43	7%	0%
[5]	Email	29	4%	0%
[6]	eCommerce Platforms	32	5%	0%
[7]	Digital Audio	34	5%	0%
[8]	App/In-app	33	5%	0%
[9]	Connected TV	26	4%	0%
[10]	Other	-	0%	0%
[11]	Don’t know / Unsure	3	n/a	n/a
[12]	Total Shown Question	117		

APPENDIX EXHIBIT 57

LOWER-SPEND ADVERTISER SURVEY
DIGITAL ADVERTISING BUDGET SHARE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q8: Previously, you mentioned that you have used the following types of digital advertising in the past year. What is your best estimate of the share of your digital advertising spending that was used for each of these types of advertising in the past year? Specifically, please allocate 100% across the different types of digital advertising shown below based on the share of your total digital advertising budget spent on each type. The total should add up to 100%.

		$50K – $500K Ad Spend		
	Advertising Type	# of Respondents	Mean	Median
	[A]	[H]	[I]	[J]
[1]	Display	123	32%	21%
[2]	Social	79	13%	10%
[3]	Search	74	13%	10%
[4]	Digital Video	67	10%	5%
[5]	Email	66	8%	5%
[6]	eCommerce Platforms	51	7%	0%
[7]	Digital Audio	46	6%	0%
[8]	App/In-app	39	5%	0%
[9]	Connected TV	45	7%	0%
[10]	Other	-	0%	0%
[11]	Don’t know / Unsure	2	n/a	n/a
[12]	Total Shown Question	126		

Notes & Sources:
From Lower-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for “Other” and “Don’t know / Unsure.”
Respondents are shown their responses from QS12. They are asked to allocate across all selected types.
Respondents can hover their mouse over each digital advertising type to review the type description.
Budget allocated for an advertising type is assumed to be equal to 0 if respondents did not select the advertising type in QS12.
[B],[E],[H] Shows number of respondents who allocated a budget for each advertising type.

APPENDIX EXHIBIT 58

LOWER-SPEND ADVERTISER SURVEY
RESPONSE TO DISPLAY COST INCREASE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q9: Now suppose that, based on your analysis, the cost of display advertising has recently increased by a small but significant amount, and will remain elevated for the foreseeable future. Assume further that, based on similar analyses for other digital advertising types, the costs of other digital advertising types have not changed and are not expected to change. So if the cost of display advertising increases (while the cost of other advertising types remains types remains the same), will you or won't you divert some of your advertising spending for the coming year to other types of digital advertising?

		Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
	Response Options	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Will Divert Spending	143	59%	81	69%	62	49%
[2]	Will Not Divert Spending	87	36%	33	28%	54	43%
[3]	Don't know / Unsure	13	5%	3	3%	10	8%
[4]	Total Shown Question	243	100%	117	100%	126	100%

Notes & Sources:
From Lower-Spend Advertiser Survey.

APPENDIX EXHIBIT 59

LOWER-SPEND ADVERTISER SURVEY
ADVERTISING TYPES TO WHICH SPENDING WOULD BE DIVERTED
DUE TO DISPLAY COST INCREASE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q10: To which other types of digital advertising below, if any, would you divert your advertising spending for the coming year as a result of the increase in the cost of display advertising?

		Respondents Indicating They Would Divert Spending to the Advertising Type					
		Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
	Advertising Type	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Social	84	59%	53	65%	31	50%
[2]	Email	60	42%	27	33%	33	53%
[3]	Search	60	42%	33	41%	27	44%
[4]	Digital Video	54	38%	30	37%	24	39%
[5]	Digital Audio	53	37%	25	31%	28	45%
[6]	eCommerce Platforms	47	33%	26	32%	21	34%
[7]	App/In-app	38	27%	20	25%	18	29%
[8]	Connected TV	37	26%	15	19%	22	35%
[9]	Other	1	1%	-	0%	1	2%
[10]	None of the above	-	0%	-	0%	-	0%
[11]	Don't know / Unsure	-	0%	-	0%	-	0%
[12]	Total Shown Question	143	100%	81	100%	62	100%

Notes & Sources:
From Lower-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for "Other," "None of the above," and "Don't know/Unsure."
Respondents can hover their mouse over each digital advertising type to review the type description.
Percentages do not add up to 100% because respondents can select multiple options.
Respondents were only shown Q10 if they indicated that they would divert advertising spending to other types of digital advertising in Q9.

APPENDIX EXHIBIT 60

LOWER-SPEND ADVERTISER SURVEY
NUMBER OF ADVERTISING TYPES TO WHICH SPENDING WOULD BE DIVERTED
DUE TO DISPLAY COST INCREASE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q10: To which other types of digital advertising below, if any, would you divert your advertising spending for the coming year as a result of the increase in the cost of display advertising?

		Respondents Indicating They Would Divert Spending to the Number of Advertising Types					
	Number of Advertising Types Diverted Spending to	Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
		#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	0	-	0%	-	0%	-	0%
[2]	1	19	13%	10	12%	9	15%
[3]	2	28	20%	18	22%	10	16%
[4]	3	58	41%	40	49%	18	29%
[5]	4	19	13%	7	9%	12	19%
[6]	5	10	7%	2	2%	8	13%
[7]	6	6	4%	3	4%	3	5%
[8]	7	1	1%	1	1%	-	0%
[9]	8	2	1%	-	0%	2	3%
[10]	9	-	0%	-	0%	-	0%
[11]	Don't know / Unsure	-	0%	-	0%	-	0%
[12]	Total Shown Question	143	100%	81	100%	62	100%

Notes & Sources:
From Lower-Spend Advertiser Survey.
Respondents were shown Q10 if they indicated that they would divert advertiser spending to other types of digital advertising in Q9.
Respondents can hover their mouse over each digital advertising type to review the type description.

APPENDIX EXHIBIT 61

LOWER-SPEND ADVERTISER SURVEY
EXTENT OF SPENDING CHANGES AS A RESULT OF DISPLAY COST INCREASE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q11: In your previous answer, you indicated that the increase in the cost of display advertising will lead you to divert some of your advertising spending to the types of digital advertising listed below. Please use the sliders below to indicate, on a scale of 0 to 10, the extent to which you would divert (that is, increase) advertising spending for the coming year to each type of digital advertising that you just indicated. For each digital advertising type below, please select 0 if you expect to keep spending on that type of digital advertising for the coming year and 10 if you expect to substantially increase spending on that type of digital advertising.

All Respondents

	Advertising Type	Total Respondents	Average Extent of Increase	Number of Respondents by Extent of Increase 0	1	2	3	4	5	6	7	8	9	10	Don't know / Unsure
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]
[1]	Social	84	8.1	-	-	-	-	2	3	6	15	22	21	15	-
[2]	Email	60	7.2	1	2	2	-	1	2	5	13	19	10	5	-
[3]	Search	60	7.9	-	1	2	-	-	1	4	11	13	21	7	-
[4]	Digital Video	54	7.7	1	-	-	-	1	-	4	17	17	9	5	-
[5]	Digital Audio	53	7.7	-	-	1	1	-	-	5	14	14	16	2	-
[6]	eCommerce Platforms	47	7.7	-	-	-	1	-	3	2	14	12	10	5	-
[7]	App/In-app	38	7.9	-	-	-	-	1	2	4	4	13	8	6	-
[8]	Connected TV	37	7.4	-	1	1	-	1	2	3	9	9	8	3	-
[9]	Other	1	10.0	-	-	-	-	-	-	-	-	-	-	1	-

	Advertising Type	Total Respondents	Average Extent of Increase	Number of Respondents by Extent of Increase 0	1	2	3	4	5	6	7	8	9	10	Don't know / Unsure
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]
[1]	Social	100%	n/a	0%	0%	0%	0%	2%	4%	7%	18%	26%	25%	18%	0%
[2]	Email	100%	n/a	2%	3%	3%	0%	2%	3%	8%	22%	32%	17%	8%	0%
[3]	Search	100%	n/a	0%	2%	3%	0%	0%	2%	7%	18%	22%	35%	12%	0%
[4]	Digital Video	100%	n/a	2%	0%	0%	0%	2%	0%	7%	31%	31%	17%	9%	0%
[5]	Digital Audio	100%	n/a	0%	0%	2%	2%	0%	0%	9%	26%	26%	30%	4%	0%
[6]	eCommerce Platforms	100%	n/a	0%	0%	0%	2%	0%	6%	4%	30%	26%	21%	11%	0%
[7]	App/In-app	100%	n/a	0%	0%	0%	0%	3%	5%	11%	11%	34%	21%	16%	0%
[8]	Connected TV	100%	n/a	0%	3%	3%	0%	3%	5%	8%	24%	24%	22%	8%	0%
[9]	Other	100%	n/a	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%

APPENDIX EXHIBIT 61

LOWER-SPEND ADVERTISER SURVEY
EXTENT OF SPENDING CHANGES AS A RESULT OF DISPLAY COST INCREASE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q11: In your previous answer, you indicated that the increase in the cost of display advertising will lead you to divert some of your advertising spending to the types of digital advertising listed below. Please use the sliders below to indicate, on a scale of 0 to 10, the extent to which you would divert (that is, increase) advertising spending for the coming year to each type of digital advertising that you just indicated. For each digital advertising type below, please select 0 if you expect to keep spending on that type of digital advertising for the coming year and 10 if you expect to substantially increase spending on that type of digital advertising.

< Than $50K Ad Spend

		Total	Average Extent	Number of Respondents by Extent of Increase											Don't know
	Advertising Type	Respondents	of Increase	0	1	2	3	4	5	6	7	8	9	10	/ Unsure
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]
[10]	Social	53	8.3	-	-	-	-	1	1	4	7	12	17	11	-
[11]	Email	27	7.6	-	-	1	-	-	2	2	4	11	6	1	-
[12]	Search	33	8.2	-	-	1	-	-	1	1	4	8	13	5	-
[13]	Digital Video	30	7.9	-	-	-	-	-	-	3	8	11	4	4	-
[14]	Digital Audio	25	7.6	-	-	1	-	-	-	3	9	4	6	2	-
[15]	eCommerce Platforms	26	7.8	-	-	-	-	-	-	1	10	8	6	1	-
[16]	App/In-app	20	8.0	-	-	-	-	-	1	2	2	9	4	2	-
[17]	Connected TV	15	7.8	-	-	-	-	-	-	1	7	2	4	1	-
[18]	Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-

		Total	Average Extent	Number of Respondents by Extent of Increase											Don't know
	Advertising Type	Respondents	of Increase	0	1	2	3	4	5	6	7	8	9	10	/ Unsure
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]
[10]	Social	100%	n/a	0%	0%	0%	0%	2%	2%	8%	13%	23%	32%	21%	0%
[11]	Email	100%	n/a	0%	0%	4%	0%	0%	7%	7%	15%	41%	22%	4%	0%
[12]	Search	100%	n/a	0%	0%	3%	0%	0%	3%	3%	12%	24%	39%	15%	0%
[13]	Digital Video	100%	n/a	0%	0%	0%	0%	0%	0%	10%	27%	37%	13%	13%	0%
[14]	Digital Audio	100%	n/a	0%	0%	4%	0%	0%	0%	12%	36%	16%	24%	8%	0%
[15]	eCommerce Platforms	100%	n/a	0%	0%	0%	0%	0%	0%	4%	38%	31%	23%	4%	0%
[16]	App/In-app	100%	n/a	0%	0%	0%	0%	0%	5%	10%	10%	45%	20%	10%	0%
[17]	Connected TV	100%	n/a	0%	0%	0%	0%	0%	0%	7%	47%	13%	27%	7%	0%
[18]	Other	-	n/a	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

APPENDIX EXHIBIT 61

LOWER-SPEND ADVERTISER SURVEY
EXTENT OF SPENDING CHANGES AS A RESULT OF DISPLAY COST INCREASE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q11: In your previous answer, you indicated that the increase in the cost of display advertising will lead you to divert some of your advertising spending to the types of digital advertising listed below. Please use the sliders below to indicate, on a scale of 0 to 10, the extent to which you would divert (that is, increase) advertising spending for the coming year to each type of digital advertising that you just indicated. For each digital advertising type below, please select 0 if you expect to keep spending on that type of digital advertising for the coming year and 10 if you expect to substantially increase spending on that type of digital advertising.

$50K – $500K Ad Spend

		Total	Average Extent	Number of Respondents by Extent of Increase											Don't know
	Advertising Type	Respondents	of Increase	0	1	2	3	4	5	6	7	8	9	10	/ Unsure
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]
[19]	Social	31	7.7	-	-	-	-	1	2	2	8	10	4	4	-
[20]	Email	33	6.9	1	2	1	-	1	-	3	9	8	4	4	-
[21]	Search	27	7.5	-	1	1	-	-	-	3	7	5	8	2	-
[22]	Digital Video	24	7.3	1	-	-	-	1	-	1	9	6	5	1	-
[23]	Digital Audio	28	7.9	-	-	-	1	-	-	2	5	10	10	-	-
[24]	eCommerce Platforms	21	7.6	-	-	-	1	-	3	1	4	4	4	4	-
[25]	App/In-app	18	7.9	-	-	-	-	1	1	2	2	4	4	4	-
[26]	Connected TV	22	7.0	-	1	1	-	1	2	2	2	7	4	2	-
[27]	Other	1	10.0	-	-	-	-	-	-	-	-	-	-	1	-

		Total	Average Extent	Number of Respondents by Extent of Increase											Don't know
	Advertising Type	Respondents	of Increase	0	1	2	3	4	5	6	7	8	9	10	/ Unsure
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]
[19]	Social	100%	n/a	0%	0%	0%	0%	3%	6%	6%	26%	32%	13%	13%	0%
[20]	Email	100%	n/a	3%	6%	3%	0%	3%	0%	9%	27%	24%	12%	12%	0%
[21]	Search	100%	n/a	0%	4%	4%	0%	0%	0%	11%	26%	19%	30%	7%	0%
[22]	Digital Video	100%	n/a	4%	0%	0%	0%	4%	0%	4%	38%	25%	21%	4%	0%
[23]	Digital Audio	100%	n/a	0%	0%	0%	4%	0%	0%	7%	18%	36%	36%	0%	0%
[24]	eCommerce Platforms	100%	n/a	0%	0%	0%	5%	0%	14%	5%	19%	19%	19%	19%	0%
[25]	App/In-app	100%	n/a	0%	0%	0%	0%	6%	6%	11%	11%	22%	22%	22%	0%
[26]	Connected TV	100%	n/a	0%	5%	5%	0%	5%	9%	9%	9%	32%	18%	9%	0%
[27]	Other	100%	n/a	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%

APPENDIX EXHIBIT 61

LOWER-SPEND ADVERTISER SURVEY
EXTENT OF SPENDING CHANGES AS A RESULT OF DISPLAY COST INCREASE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Notes & Sources:
From Lower-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for "Other."
Respondents are shown their answer choices from Q10.
Respondents were shown Q11 if they did not select "None of the above" or "Don't know/Unsure" in Q10.
Respondents can hover their mouse over each digital advertising type to review the type description.
Percentages calculated by dividing the number of people choosing the extent of increase for an advertising type by the total number of people selecting the advertising type to which to divert spending.
[C] Calculated as the average of extent of increase in [D] through [N], weighted by the number of respondents.

APPENDIX EXHIBIT 62

LOWER-SPEND ADVERTISER SURVEY
EXTENT OF SPENDING CHANGES AS A RESULT OF DISPLAY COST INCREASE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q11: In your previous answer, you indicated that the increase in the cost of display advertising will lead you to divert some of your advertising spending to the types of digital advertising listed below. Please use the sliders below to indicate, on a scale of 0 to 10, the extent to which you would divert (that is, increase) advertising spending for the coming year to each type of digital advertising that you just indicated. For each digital advertising type below, please select 0 if you expect to keep spending on that type of digital advertising for the coming year and 10 if you expect to substantially increase spending on that type of digital advertising.

All Respondents

	Advertising Type	Total Respondents	Number of Respondents by Extent of Increase			Don't know / Unsure
			0 – 3	4 – 6	7 – 10	
	[A]	[B]	[C]	[D]	[E]	[F]
[1]	Social	84	-	11	73	-
[2]	Email	60	5	8	47	-
[3]	Search	60	3	5	52	-
[4]	Digital Video	54	1	5	48	-
[5]	Digital Audio	53	2	5	46	-
[6]	eCommerce Platforms	47	1	5	41	-
[7]	App/In-app	38	-	7	31	-
[8]	Connected TV	37	2	6	29	-
[9]	Other	1	-	-	1	-

	Advertising Type	Total Respondents	Number of Respondents by Extent of Increase			Don't know / Unsure
			0 – 3	4 – 6	7 – 10	
	[A]	[B]	[C]	[D]	[E]	[F]
[1]	Social	100%	0%	13%	87%	0%
[2]	Email	100%	8%	13%	78%	0%
[3]	Search	100%	5%	8%	87%	0%
[4]	Digital Video	100%	2%	9%	89%	0%
[5]	Digital Audio	100%	4%	9%	87%	0%
[6]	eCommerce Platforms	100%	2%	11%	87%	0%
[7]	App/In-app	100%	0%	18%	82%	0%
[8]	Connected TV	100%	5%	16%	78%	0%
[9]	Other	100%	0%	0%	100%	0%

APPENDIX EXHIBIT 62

LOWER-SPEND ADVERTISER SURVEY
EXTENT OF SPENDING CHANGES AS A RESULT OF DISPLAY COST INCREASE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q11: In your previous answer, you indicated that the increase in the cost of display advertising will lead you to divert some of your advertising spending to the types of digital advertising listed below. Please use the sliders below to indicate, on a scale of 0 to 10, the extent to which you would divert (that is, increase) advertising spending for the coming year to each type of digital advertising that you just indicated. For each digital advertising type below, please select 0 if you expect to keep spending on that type of digital advertising for the coming year and 10 if you expect to substantially increase spending on that type of digital advertising.

< Than $50K Ad Spend

		Total	Number of Respondents by Extent of Increase			Don't know
	Advertising Type	Respondents	0 – 3	4 – 6	7 – 10	/ Unsure
	[A]	[B]	[C]	[D]	[E]	[F]
[10]	Social	53	-	6	47	-
[11]	Email	27	1	4	22	-
[12]	Search	33	1	2	30	-
[13]	Digital Video	30	-	3	27	-
[14]	Digital Audio	25	1	3	21	-
[15]	eCommerce Platforms	26	-	1	25	-
[16]	App/In-app	20	-	3	17	-
[17]	Connected TV	15	-	1	14	-
[18]	Other	-	-	-	-	-

		Total	Number of Respondents by Extent of Increase			Don't know
	Advertising Type	Respondents	0 – 3	4 – 6	7 – 10	/ Unsure
	[A]	[B]	[C]	[D]	[E]	[F]
[10]	Social	100%	0%	11%	89%	0%
[11]	Email	100%	4%	15%	81%	0%
[12]	Search	100%	3%	6%	91%	0%
[13]	Digital Video	100%	0%	10%	90%	0%
[14]	Digital Audio	100%	4%	12%	84%	0%
[15]	eCommerce Platforms	100%	0%	4%	96%	0%
[16]	App/In-app	100%	0%	15%	85%	0%
[17]	Connected TV	100%	0%	7%	93%	0%
[18]	Other	0%	0%	0%	0%	0%

APPENDIX EXHIBIT 62

LOWER-SPEND ADVERTISER SURVEY
EXTENT OF SPENDING CHANGES AS A RESULT OF DISPLAY COST INCREASE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q11: In your previous answer, you indicated that the increase in the cost of display advertising will lead you to divert some of your advertising spending to the types of digital advertising listed below. Please use the sliders below to indicate, on a scale of 0 to 10, the extent to which you would divert (that is, increase) advertising spending for the coming year to each type of digital advertising that you just indicated. For each digital advertising type below, please select 0 if you expect to keep spending on that type of digital advertising for the coming year and 10 if you expect to substantially increase spending on that type of digital advertising.

$50K – $500K Ad Spend

		Total	Number of Respondents by Extent of Increase			Don't know
	Advertising Type	Respondents	0 – 3	4 – 6	7 – 10	/ Unsure
	[A]	[B]	[C]	[D]	[E]	[F]
[19]	Social	31	-	5	26	-
[20]	Email	33	4	4	25	-
[21]	Search	27	2	3	22	-
[22]	Digital Video	24	1	2	21	-
[23]	Digital Audio	28	1	2	25	-
[24]	eCommerce Platforms	21	1	4	16	-
[25]	App/In-app	18	-	4	14	-
[26]	Connected TV	22	2	5	15	-
[27]	Other	1	-	-	1	-

		Total	Number of Respondents by Extent of Increase			Don't know
	Advertising Type	Respondents	0 – 3	4 – 6	7 – 10	/ Unsure
	[A]	[B]	[C]	[D]	[E]	[F]
[19]	Social	100%	0%	16%	84%	0%
[20]	Email	100%	12%	12%	76%	0%
[21]	Search	100%	7%	11%	81%	0%
[22]	Digital Video	100%	4%	8%	88%	0%
[23]	Digital Audio	100%	4%	7%	89%	0%
[24]	eCommerce Platforms	100%	5%	19%	76%	0%
[25]	App/In-app	100%	0%	22%	78%	0%
[26]	Connected TV	100%	9%	23%	68%	0%
[27]	Other	100%	0%	0%	100%	0%

APPENDIX EXHIBIT 62

LOWER-SPEND ADVERTISER SURVEY
EXTENT OF SPENDING CHANGES AS A RESULT OF DISPLAY COST INCREASE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Notes & Sources:
From Lower-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for "Other."
Respondents are shown their answer choices from Q10.
Respondents were shown Q11 if they did not select "None of the above" or "Don't know/Unsure" in Q10.
Respondents can hover their mouse over each digital advertising type to review the type description.
Percentages calculated by dividing the number of people choosing the extent of increase for an advertising type by the total number of people selecting the advertising type to which to divert spending.

APPENDIX EXHIBIT 63

LOWER-SPEND ADVERTISER SURVEY
PERFORMANCE ASSESSMENT METRICS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q12: Which of the following metrics, if any, are you using to assess the performance of display ads and/or social media ads? (Please select all that apply in each column.)

All Respondents

	Metric	Display Ads		Social Media Ads	
		#	%	#	%
	[A]	[B]	[C]	[D]	[E]
[1]	Return on Investment (ROI)	98	40%	71	44%
[2]	Cost per click (CPC)	97	40%	80	50%
[3]	Clicks	94	39%	74	46%
[4]	Click through rate (CTR)	90	37%	73	45%
[5]	Return on Ad Spend (ROAS)	85	35%	66	41%
[6]	Cost per action (CPA)	81	33%	60	37%
[7]	Cost per impression (CPM)	75	31%	59	37%
[8]	Impressions	75	31%	49	30%
[9]	Conversions	73	30%	55	34%
[10]	Other	3	1%	-	0%
[11]	Don’t know / Unsure	3	1%	3	2%
[12]	None of the above	1	0%	-	0%
[13]	Total Shown Question	243	100%	161	100%

< Than $50K Ad Spend

	Metric	Display Ads		Social Media Ads	
		#	%	#	%
	[A]	[B]	[C]	[D]	[E]
[14]	Return on Investment (ROI)	51	44%	36	45%
[15]	Cost per click (CPC)	47	40%	43	54%
[16]	Clicks	39	33%	37	46%
[17]	Click through rate (CTR)	41	35%	38	48%
[18]	Return on Ad Spend (ROAS)	36	31%	31	39%
[19]	Cost per action (CPA)	38	32%	25	31%
[20]	Cost per impression (CPM)	36	31%	29	36%
[21]	Impressions	35	30%	19	24%
[22]	Conversions	27	23%	27	34%
[23]	Other	-	0%	-	0%
[24]	Don’t know / Unsure	3	3%	3	4%
[25]	None of the above	-	0%	-	0%
[26]	Total Shown Question	117	100%	80	100%

APPENDIX EXHIBIT 63

LOWER-SPEND ADVERTISER SURVEY
PERFORMANCE ASSESSMENT METRICS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q12: Which of the following metrics, if any, are you using to assess the performance of display ads and/or social media ads? (Please select all that apply in each column.)

$50K – $500K Ad Spend

		Display Ads		Social Media Ads	
	Metric	#	%	#	%
	[A]	[B]	[C]	[D]	[E]
[27]	Return on Investment (ROI)	47	37%	35	43%
[28]	Cost per click (CPC)	50	40%	37	46%
[29]	Clicks	55	44%	37	46%
[30]	Click through rate (CTR)	49	39%	35	43%
[31]	Return on Ad Spend (ROAS)	49	39%	35	43%
[32]	Cost per action (CPA)	43	34%	35	43%
[33]	Cost per impression (CPM)	39	31%	30	37%
[34]	Impressions	40	32%	30	37%
[35]	Conversions	46	37%	28	35%
[36]	Other	3	2%	-	0%
[37]	Don’t know / Unsure	-	0%	-	0%
[38]	None of the above	1	1%	-	0%
[39]	Total Shown Question	126	100%	81	100%

Notes & Sources:
From Lower-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for “Don’t know/Unsure” and “None of the above.”
Respondents were only asked about each of the above advertising types if they had indicated in QS12 that they had used those advertising types in the past year.
Percentages do not add up to 100% because respondents can select multiple options.

APPENDIX EXHIBIT 64

LOWER-SPEND ADVERTISER SURVEY
RANKING OF PERFORMANCE ASSESSMENT METRICS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q13: You indicated that you use the following metrics to assess the performance of display ads.
Please rank these metrics in terms of how important they are to accurately assessing the performance of digital display ads, with 1 being the most important and [NUMBER OF MEASURES SELECTED IN Q12] being the least important.
(Please rank the following metrics, or select "Don't know / Unsure".)

All Respondents

	Respondents Ranking Metric As Most Important		Respondents Ranking Metric Among the Top 3 Most Important	
Metric	#	%	#	%
[A]	[B]	[C]	[D]	[E]
Return on Investment (ROI)	46	19%	85	36%
Clicks	35	15%	67	28%
Cost per click (CPC)	34	14%	71	30%
Return on Ad Spend (ROAS)	29	12%	68	29%
Cost per action (CPA)	23	10%	60	25%
Click through rate (CTR)	22	9%	68	29%
Cost per impression (CPM)	20	8%	51	21%
Conversions	18	8%	54	23%
Impressions	11	5%	46	19%
Other	-	0%	1	0%
Total	238	100%	238	100%

< Than $50K Ad Spend

		Respondents Ranking Metric As Most Important		Respondents Ranking Metric Among the Top 3 Most Important	
	Metric	#	%	#	%
	[A]	[B]	[C]	[D]	[E]
[12]	Return on Investment (ROI)	22	19%	43	38%
[13]	Clicks	15	13%	27	24%
[14]	Cost per click (CPC)	20	18%	35	31%
[15]	Return on Ad Spend (ROAS)	16	14%	29	26%
[16]	Cost per action (CPA)	10	9%	29	26%
[17]	Click through rate (CTR)	9	8%	32	28%
[18]	Cost per impression (CPM)	11	10%	26	23%
[19]	Conversions	6	5%	19	17%
[20]	Impressions	4	4%	22	19%
[21]	Other	-	0%	-	0%
[22]	Total	113	100%	113	100%

APPENDIX EXHIBIT 64

LOWER-SPEND ADVERTISER SURVEY
RANKING OF PERFORMANCE ASSESSMENT METRICS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q13: You indicated that you use the following metrics to assess the performance of display ads.
Please rank these metrics in terms of how important they are to accurately assessing the performance of digital display ads, with 1 being the most important and [NUMBER OF MEASURES SELECTED IN Q12] being the least important.
(Please rank the following metrics, or select “Don’t know / Unsure”.)

$50K – $500K Ad Spend

		Respondents Ranking Metric As Most Important		Respondents Ranking Metric Among the Top 3 Most Important	
	Metric	#	%	#	%
	[A]	[B]	[C]	[D]	[E]
[23]	Return on Investment (ROI)	24	19%	42	34%
[24]	Clicks	20	16%	40	32%
[25]	Cost per click (CPC)	14	11%	36	29%
[26]	Return on Ad Spend (ROAS)	13	10%	39	31%
[27]	Cost per action (CPA)	13	10%	31	25%
[28]	Click through rate (CTR)	13	10%	36	29%
[29]	Cost per impression (CPM)	9	7%	25	20%
[30]	Conversions	12	10%	35	28%
[31]	Impressions	7	6%	24	19%
[32]	Other	-	0%	1	1%
[33]	Total	125	100%	125	100%

Notes & Sources:
From Lower-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for “Other.”
Respondents are only shown Q13 if they indicate that they used more than one metric to assess the performance of display advertising in Q12. Respondents who selected only one metric in Q12 are assumed to have that metric ranked as most important.
Total includes respondents who ranked metrics in Q13 or selected only one metric in Q12.
1 respondent (less than 1 percent of respondents who used at least one metric to assess the performance of display ads) selected “Don’t know/Unsure.” This respondent had an annual ad spend of less than $50,000.

APPENDIX EXHIBIT 65

LOWER-SPEND ADVERTISER SURVEY
FREQUENCY OF PERFORMANCE ASSESSMENT
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q14: How often, if at all, do you measure or assess the performance of your display advertising? (Please select only one option.)

If you are using an ad agency and/or consultant and they are responsible for measuring or assessing performance of your display advertising, please indicate how often you receive information about the performance of your display advertising from the agency.

		Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
	Frequency	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Daily	21	9%	8	7%	13	10%
[2]	Weekly	110	45%	63	54%	47	37%
[3]	Monthly	70	29%	29	25%	41	33%
[4]	Quarterly	35	14%	12	10%	23	18%
[5]	Annually	6	2%	4	3%	2	2%
[6]	Don’t know / Unsure	1	0%	1	1%	-	0%
[7]	Total Shown Question	243	100%	117	100%	126	100%

Notes & Sources:
From Lower-Spend Advertiser Survey.

APPENDIX EXHIBIT 66

LOWER-SPEND ADVERTISER SURVEY
EXPERIMENTS ON DISPLAY ADS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q15: In the past year, have you run any experiments or test & learn initiatives on your digital display ads?
(Please select only one option.)

		Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
	Response Options	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Yes	134	55%	70	60%	64	51%
[2]	No	106	44%	46	39%	60	48%
[3]	Don’t know / Unsure	3	1%	1	1%	2	2%
[4]	Total Shown Question	243	100%	117	100%	126	100%

Notes & Sources:
From Lower-Spend Advertiser Survey.

APPENDIX EXHIBIT 67

LOWER-SPEND ADVERTISER SURVEY
TYPES OF EXPERIMENTS ON DISPLAY ADS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q16: Which of the following types of experiments or test & learn initiatives, if any, have you run in the past year on your digital display ads?

		Total Respondents		< Than $50K Ad Spend		$50K – $500K Ad Spend	
	Experiment Type	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Creatives	80	60%	44	63%	36	56%
[2]	Audiences	57	43%	20	29%	37	58%
[3]	ROI/ROAS	60	45%	32	46%	28	44%
[4]	Ad buying tool performance	51	38%	24	34%	27	42%
[5]	Bid strategies	47	35%	18	26%	29	45%
[6]	Publishers	39	29%	16	23%	23	36%
[7]	Other	-	0%	-	0%	-	0%
[8]	Don’t know / Unsure	1	1%	-	0%	1	2%
[9]	Total Shown Question	134	100%	70	100%	64	100%

Notes & Sources:
From Lower-Spend Advertiser Survey.
Sorted in descending order based on column [B], except for “Other” and “Don’t know/Unsure.”
Percentages do not add up to 100% because respondents can select multiple options.
Respondents were shown Q16 if they indicated in Q15 that they had conducted experiments or test & learn initiatives on their display ads in the past year.

APPENDIX EXHIBIT 68

AGENCY SURVEY
RESPONSE STATISTICS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

	Status	#	%
[1]	**Invited to Complete Survey**	**3,916**	**100%**
[2]	**Clicked on Survey Link**	**1,909**	**100%**
[3]	**Screened Out of Survey**	**1,368**	**72%**
[4]	*CAPTCHA*	*12*	*1%*
[5]	*Age*	*14*	*1%*
[6]	*State*	*11*	*1%*
[7]	*Job Responsibilities*	*235*	*12%*
[8]	*Not Employed by a Media Agency or Full Service Agency*	*681*	*36%*
[9]	*Full Service Agency Not Focused on Media Strategy*	*171*	*9%*
[10]	*No Digital Advertising Spend*	*-*	*0%*
[11]	*Did Not Use Display Advertising*	*83*	*4%*
[12]	*Did Not Use Programmatic Display*	*24*	*1%*
[13]	*Not Involved in Decision Making Roles for Display Advertising*	*19*	*1%*
[14]	*Failed Attention Check*	*11*	*1%*
[15]	*Overquota Respondents*	*107*	*6%*
[16]	**Self-Termination**	**78**	**4%**
[17]	**Completed the Survey**	**463**	**100%**
[18]	**Removed from Sample**	**82**	**18%**
[19]	*Slowpokes and Speeders*	*11*	*2%*
[20]	*Asked to be Excluded*	*71*	*15%*
[21]	**Analytical Sample**	**381**	**100%**
[22]	*Selected a Decoy Option*	*50*	*13%*
[23]	**Analytical Sample (Excluding Respondents Selecting a Decoy Option)**	**331**	**87%**

Notes & Sources:
From Agency Survey.
[4] Respondents who failed the CAPTCHA three times were screened out of the study.
[5] Respondents who selected “Under 18” or “Prefer not to answer” in QS3 were screened out of the study.
[6] Respondents who selected “Other” or “Don’t know / Unsure” in QS5 were screened out of the study.

APPENDIX EXHIBIT 68

AGENCY SURVEY
RESPONSE STATISTICS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Notes & Sources (cont.):

[7] Respondents who indicated in QS6 that, as part of their job responsibilities, they do not have any involvement with "Advertising or Marketing" were screened out of the study.

[8] Respondents who indicated in QS7 that they did not work for a "Media Agency" or "Full Service Agency" were screened out of the study.

[9] Respondents who indicated in QS7 that they work for a "Full Service Agency" but not in "Media Strategy" in QS8 were screened out of the study.

[10] Respondents who indicated in QS13 that the percentage of the client they spend the most time on's total advertising budget spent on digital (online) advertising was zero were screened out of the study.

[11] Respondents who did not indicate in QS14 that the client they spend the most time on used display advertising in the past year were screened out of the study.

[12] Respondents who did not indicate in QS15 that the client they spend the most time on used programmatic transaction methods to purchase display ad inventory were screened out of the study.

[13] Respondents who did not select "I determine or advise the client regarding overall strategies and/or budgets for digital display," "I determine or advise the client regarding which buying tools and/or demand-side platforms (DSPs) to use for digital display," "I regularly use self-serve ad platforms to manage digital display campaigns," or "I oversee a team/individuals that use(s) self-serve ad platforms to manage digital display campaigns" responses in QS17 were screened out of the study.

[14] Respondents who did not select "Somewhat likely" in QS18 were screened out of the study.

[15] Respondents were terminated due to entering the survey after it had been closed for sampling.

[16] Respondents who only completed part of the survey.

[19] Respondents who took less than 100 seconds (1.67 minutes) or more than 10,800 seconds (3 hours) to complete the survey were removed from the analysis.

[20] Respondents were asked if they are willing to participate in this survey after completing the questionnaire. Respondents who selected "Exclude my responses" in QF1 were removed from the data by the panel vendor.

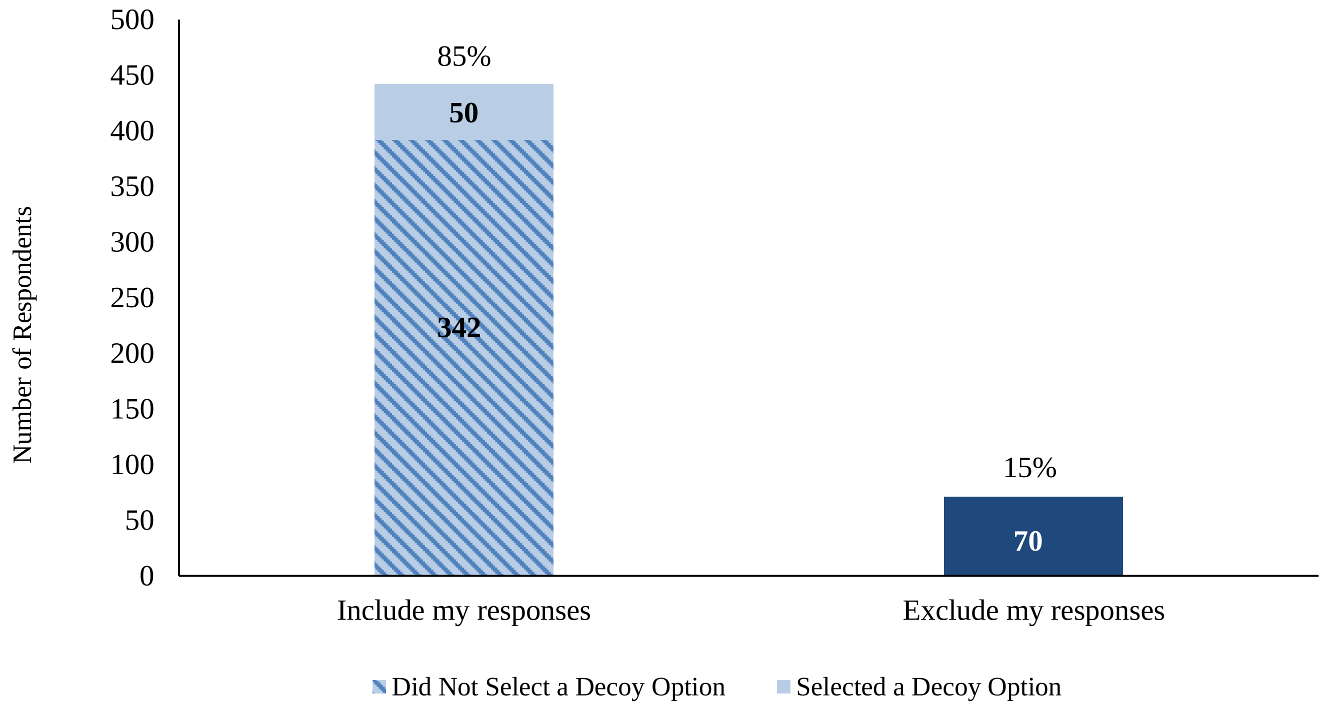
[22] Respondents who selected one or more decoy options in the survey were removed from the analysis. These respondents selected "Ad Step Technologies," "Quorexx" in Q7, and/or "FriendLinx" in QS16.

[23] These respondents were used in the analysis.

APPENDIX EXHIBIT 69

AGENCY SURVEY
SURVEY PARTICIPATION PREFERENCE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

QF1: This survey is being conducted by consultants that have been retained on behalf of Google in connection with pending antitrust lawsuits in which the plaintiffs allege that Google engaged in anticompetitive conduct related to digital advertising. If you are willing to participate in this survey, please click "Include my responses" below. As a reminder, your responses will be kept anonymous and will be analyzed as part of a larger sample of responses. If you do not want to participate in this survey, please click "Exclude my responses" below.



Notes & Sources:
From Agency Survey.
Includes respondents who completed the survey.
Respondents who indicated that they wanted their responses excluded from the survey were removed from the data by the panel vendor.

APPENDIX EXHIBIT 70

AGENCY SURVEY
RESPONDENT DEMOGRAPHICS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

		#	%
		[A]	[B]
	Age		
[1]	18 - 34	84	25%
[2]	35 - 49	203	61%
[3]	50 - 64	43	13%
[4]	65 or above	1	0%
[5]	Total	331	100%
	Gender		
[6]	Female	105	32%
[7]	Male	225	68%
[8]	Other	-	0%
[9]	Prefer not to answer	1	0%
[10]	Total	331	100%

Source:
From Agency Survey.

APPENDIX EXHIBIT 71

AGENCY SURVEY
JOB TITLES
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

QS9: Which of the following best characterizes your current job title/level? (Please select only one option.)

	Job Title / Level	Total Respondents #	Total Respondents %
	[A]	[B]	[C]
[1]	C-Level (CEO, COO, CMO, etc.)	111	34%
[2]	Strategist	50	15%
[3]	Social Media Manager	38	11%
[4]	Media Planner	30	9%
[5]	Account Manager / Account Executive	26	8%
[6]	Project Manager	22	7%
[7]	Media Buyer	19	6%
[8]	Business Development Manager	13	4%
[9]	Data Scientist / Data Analyst	2	1%
[10]	Traffic Manager	2	1%
[11]	Analyst / Researcher	1	0%
[12]	Editor / Writer	-	-
[13]	Other	17	5%
[13]	Total	331	100%

Notes & Sources:
From Agency Survey.
Sorted in descending order based on column [B], except for “Other.”

APPENDIX EXHIBIT 72

AGENCY SURVEY
MARKET SECTORS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

QS11: Which of the following, if any, best characterizes the market sector/industry of the client you spend the most time on? (Please select only one option.)

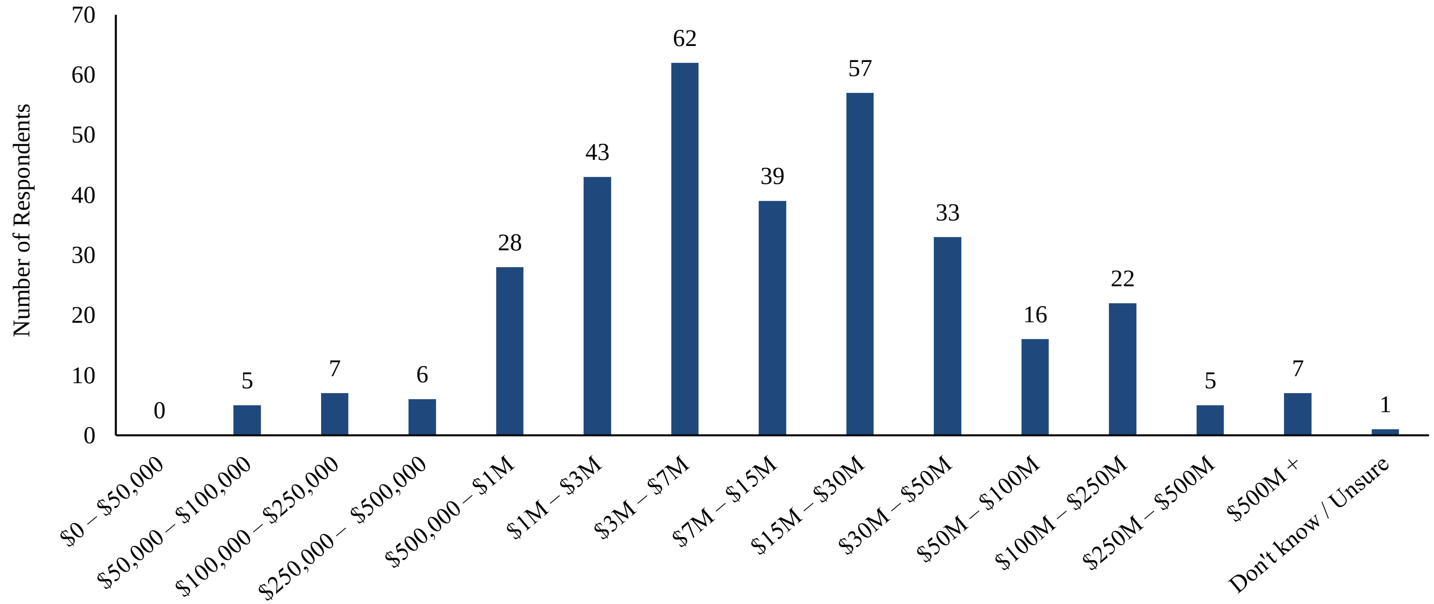
		Total Respondents	
	Market Sector / Industry	#	%
	[A]	[B]	[C]
[1]	Advertising or Marketing	118	36%
[2]	Retail (including Ecommerce)	35	11%
[3]	B2B/Services for Businesses	22	7%
[4]	Apparel/Fashion	19	6%
[5]	Media and Entertainment	17	5%
[6]	Travel and Hospitality	15	5%
[7]	Automotive	15	5%
[8]	Food and Beverage	14	4%
[9]	Financial Products/Services for Consumers (including Fintech)	13	4%
[10]	Pharmaceuticals and Remedies (Rx or OTC)	12	4%
[11]	Health Care or Medical Services	9	3%
[12]	Health and Beauty Products	8	2%
[13]	Telecommunications	6	2%
[14]	Restaurants	6	2%
[15]	Education	5	2%
[16]	Consumer Electronics	5	2%
[17]	Non-Profit	4	1%
[18]	Home Products/Appliances	2	1%
[19]	Government	1	0%
[20]	Other	5	2%
[21]	Total	331	100%

Notes & Sources:
From Agency Survey.
Sorted in descending order based on column [B], except for “Other.”

APPENDIX EXHIBIT 73

AGENCY SURVEY
ANNUAL AD SPEND
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

QS12: In the last 12 months, approximately how much did the client you spend the most time on spend on all advertising, includes all digital types (e.g., display, video, audio, social) plus all nondigital types (e.g., TV types, print, OOH, etc.)? (Please select only one option.)

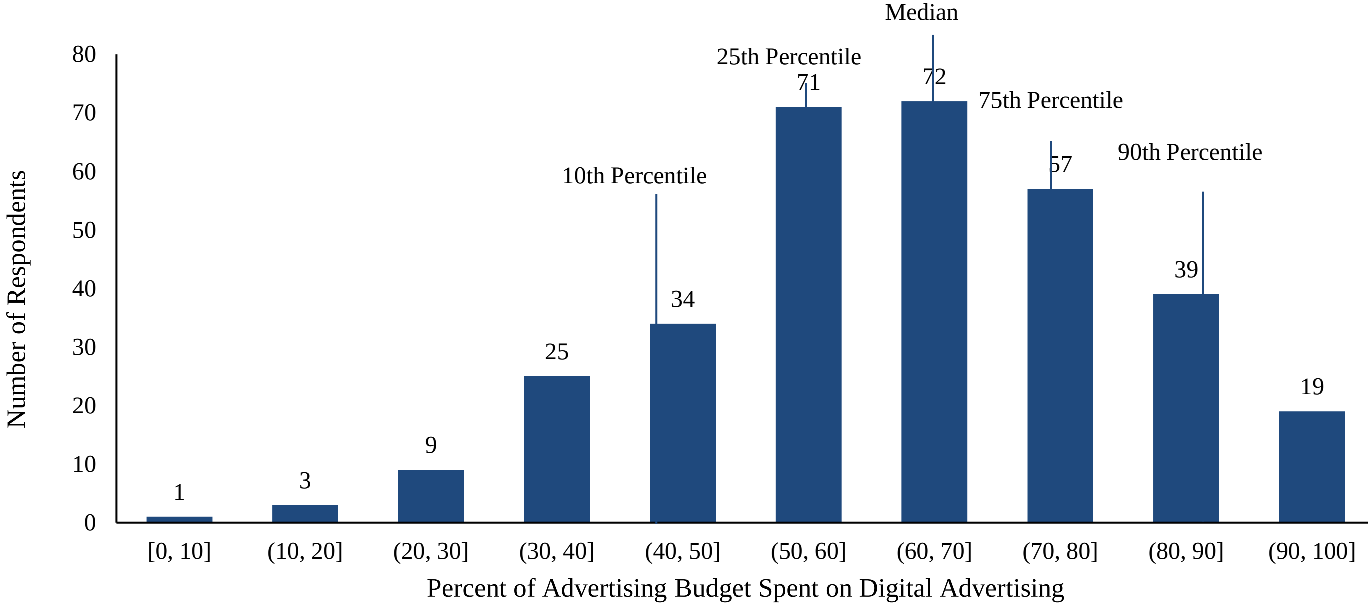


Notes & Sources:
From Agency Survey.

APPENDIX EXHIBIT 74

AGENCY SURVEY
PERCENT OF BUDGET SPENT ON DIGITAL ADVERTISING
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

QS13: Please think about the total advertising budget for the client you spend the most time on. In the past year, what percentage of the total advertising budget for the client you spend the most time on was used for digital (online) advertising, as opposed to offline advertising? Please give your best estimate.



Notes & Sources:
From Agency Survey
Respondents who entered zero for digital (online) advertising were screened out of the survey.
1 respondent selected "Don't know / Unsure."

APPENDIX EXHIBIT 75

AGENCY SURVEY
TYPES OF DIGITAL ADVERTISING USED
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

QS14: Which of the following types of digital advertising, if any, have you used in the past year for the client you spend the most time on? Please review the description of each advertising type carefully. (Please select all that apply.)

		Total Respondents	
	Advertising Type	#	%
	[A]	[B]	[C]
[1]	Display	331	100%
[2]	Social	255	77%
[3]	Search	233	70%
[4]	Digital Video	215	65%
[5]	Connected TV	168	51%
[6]	Email	161	49%
[7]	eCommerce Platforms	151	46%
[8]	App/In-App	141	43%
[9]	Digital Audio	139	42%
[10]	Other	2	1%
[11]	Total	331	100%

Notes & Sources:
From Agency Survey.
Respondents who did not select “Display” were screened out of the survey.
Percentages do not add up to 100% because respondents can select multiple options.
Sorted in descending order based on column [B], except for “Other.”

APPENDIX EXHIBIT 76

AGENCY SURVEY
NUMBER OF TYPES OF DIGITAL ADVERTISING USED
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

QS14: Which of the following types of digital advertising, if any, have you used in the past year for the client you spend the most time on? Please review the description of each advertising type carefully. (Please select all that apply.)

	Number of Types Selected	Total Respondents #	Total Respondents %
	[A]	[B]	[C]
[1]	1	45	14%
[2]	2	10	3%
[3]	3	17	5%
[4]	4	35	11%
[5]	5	51	15%
[6]	6	44	13%
[7]	7	49	15%
[8]	8	42	13%
[9]	9	38	11%
[10]	10	-	0%
[11]	Total	331	100%

Notes & Sources:
From Agency Survey.

APPENDIX EXHIBIT 77

AGENCY SURVEY
DISPLAY ADVERTISING TRANSACTION METHODS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

QS15: Which of the following transaction methods have you used to purchase display ad inventory in the past year for the client you spend the most time on? (Please select all that apply.)

		Total Respondents	
	Transaction Method	#	%
	[A]	[B]	[C]
[1]	Programmatic Only	177	53%
[2]	Programmatic and Direct Deals	154	47%
[3]	Total	331	100%

Notes & Sources:
From Agency Survey.
Respondents who selected “Direct Deals Only,” “None of the Above,” or “Don’t know / Unsure” were screened out of the survey.

APPENDIX EXHIBIT 78

AGENCY SURVEY
SOCIAL MEDIA PLATFORMS USED
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

QS16: You indicated that you have used social advertising in the past year for the client you spend the most time on. Which of the following social media platforms, if any, have you used in the past year for the client you spend the most time on? (Please select all that apply.)

	Social Media Platform	Total Respondents #	Total Respondents %
	[A]	[B]	[C]
[1]	Facebook	233	91%
[2]	Instagram	217	85%
[3]	LinkedIn	154	60%
[4]	Tiktok	126	49%
[5]	Twitter	124	49%
[6]	Snapchat	90	35%
[7]	Pinterest	82	32%
[8]	Reddit	55	22%
[9]	Tumblr	6	2%
[10]	FriendLinx	-	0%
[11]	Other	5	2%
[12]	None of the Above	-	0%
[13]	Don’t know / Unsure	1	0%
[14]	Total Shown Question	255	100%

Notes & Sources:
From Agency Survey.
Sorted in descending order based on column [B], except for “Other,” “None of the Above,” and “Don’t know / Unsure.”
Percentages do not add to 100% because respondents can select multiple options.
Respondents were only shown QS16 if they indicated in QS14 that they had used social advertising in the past year for the client they spend the most time on.

APPENDIX EXHIBIT 79

AGENCY SURVEY
ROLE OF AGENCY VS. THE CLIENT
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q2: Which of the following best describes your involvement in each of these activities for the client you spend the most time on? (Please select a value on the slider between 0 and 100 for each activity. If you do not have an answer, please select “Don’t know / Unsure”)

	Roles	Mean	Median
	[A]	[B]	[C]
[1]	Determining initial advertising budget	68	74
[2]	Allocating budget across different advertising types	73	77
[3]	Increasing/decreasing spending on a particular type of advertising	73	75
[4]	Increasing/decreasing spending on a particular ad campaign	72	75
[5]	Making changes to a campaign based on its performance	74	76
[6]	Deciding where to advertise	73	77
[7]	Deciding whether to purchase display ads programmatically or through direct deals with publishers	71	75
[8]	Measuring performance of display ad campaigns	70	75

Notes & Sources:
From Agency Survey.
0 is labeled as “I am not involved in these decisions” and 100 is labeled as “I am the primary decision maker.”

APPENDIX EXHIBIT 80

AGENCY SURVEY
DIGITAL ADVERTISING BUDGET SHARE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q3: What is your best estimate of the share of the digital advertising budget of the client you spend the most time on that was used for each of these types of advertising in the past year? Specifically, please allocate 100% across the different types of digital advertising shown below based on the share of your client's total digital advertising budget spent on each type. The total should add up to 100%.

	Advertising Type	# of Respondents	Mean	Median
	[A]	[B]	[C]	[D]
[1]	Programmatic Display	327	31%	20%
[2]	Social	251	15%	14%
[3]	Search	229	14%	10%
[4]	Digital Video	211	9%	10%
[5]	Connected TV	166	7%	2%
[6]	Email	158	5%	0%
[7]	Direct Deals Display	151	5%	0%
[8]	eCommerce Platforms	150	6%	0%
[9]	App/In-app	138	4%	0%
[10]	Digital Audio	137	4%	0%
[11]	Other	2	0%	0%
[12]	Don't know / Unsure	4	n/a	n/a
[13]	Total Shown Question	381		

Notes & Sources:
From Agency Survey.
Sorted in descending order based on column [B], except for "Other" and "Don't know / Unsure."
Respondents were shown their responses from QS14 and QS15. They are asked to allocate across all selected types.
Respondents can hover their mouse over each digital advertising type to review the type description.
[B] Shows number of respondents who allocated a budget for each advertising type.
[C]-[D] Budget allocated for an advertising type is assumed to be equal to 0 if respondents did not select the advertising type in QS14 or QS15.

APPENDIX EXHIBIT 81

AGENCY SURVEY
RESPONSE TO PROGRAMMATIC DISPLAY COST INCREASE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q4: Now suppose that, based on your analysis, the cost of programmatic display advertising has recently increased by a small but significant amount, and will remain elevated for the foreseeable future. Assume further that, based on similar analyses for other digital advertising types, the costs of other digital advertising types have not changed and are not expected to change.
So, for the client you spend the most time on, if the cost of programmatic display advertising increases (while the cost of other advertising types remains the same), will you or won't you divert some of your advertising spending for the coming year for the client you spend the most time on to other types of digital advertising?

	Response Options	#	%
	[A]	[B]	[C]
[1]	Will Divert Spending	185	56%
[2]	Will Not Divert Spending	132	40%
[3]	Don't know / Unsure	14	4%
[4]	Total Shown Question	331	100%

Notes & Sources:
From Agency Survey.

APPENDIX EXHIBIT 82

AGENCY SURVEY
ADVERTISING TYPES TO WHICH SPENDING WOULD BE DIVERTED DUE TO PROGRAMMATIC DISPLAY COST INCREASE

Q5: To which other types of digital advertising below, if any, would you divert your advertising spending for the coming year for the client you spend the most time on, as a result of the increase in the cost of programmatic display advertising?

	Advertising Type	Respondents Indicating They Would Divert Spending to the Advertising Type	
		#	%
	[A]	[B]	[C]
[1]	Social	113	61%
[2]	Search	81	44%
[3]	Digital Video	74	40%
[4]	eCommerce Platforms	64	35%
[5]	Connected TV	64	35%
[6]	Direct Deals Display	62	34%
[7]	Email	44	24%
[8]	Digital Audio	41	22%
[9]	App/In-app	38	21%
[10]	Other	1	1%
[11]	None of the above	1	1%
[12]	Don’t know / Unsure	1	1%
[13]	Total Shown Question	185	100%

Notes & Sources:
From Agency Survey.
Sorted in descending order based on column [B], except for “Other,” “None of the above,” and “Don’t know / Unsure.”
Respondents can hover their mouse over each digital advertising type to review the advertising type description.
Percentages do not add up to 100% because respondents can select multiple options.
Respondents were only shown Q5 if they indicated in Q4 that they would divert advertising spending to other types of digital advertising for the client they spending the most time on.

APPENDIX EXHIBIT 83

AGENCY SURVEY
NUMBER OF ADVERTISING TYPES TO WHICH SPENDING WOULD BE DIVERTED DUE TO PROGRAMMATIC DISPLAY COST INCREASE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q5: To which other types of digital advertising below, if any, would you divert your advertising spending for the coming year for the client you spend the most time on, as a result of the increase in the cost of programmatic display advertising?

	Number of Advertising Types Diverted Spending To	Respondents Indicating They Would Divert Spending to the Number of Advertising Types	
		#	%
	[A]	[B]	[C]
[1]	0	1	1%
[2]	1	33	18%
[3]	2	53	29%
[4]	3	39	21%
[5]	4	24	13%
[6]	5	12	6%
[7]	6	6	3%
[8]	7	4	2%
[9]	8	2	1%
[10]	9	10	5%
[11]	10	-	0%
[12]	Don’t know / Unsure	1	1%
[13]	Total Shown Question	185	100%

Notes & Sources:
From Agency Survey.
Respondents were only shown Q5 if they indicated in Q4 that they would divert advertising spending to other types of digital advertising for the client they spending the most time on.
Respondents can hover their mouse over each digital advertising type to review the advertising type description.

APPENDIX EXHIBIT 84

AGENCY SURVEY
EXTENT OF SPENDING CHANGES AS A RESULT OF PROGRAMMATIC DISPLAY COST INCREASE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q6: In your previous answer, you indicated that the increase in the cost of programmatic display advertising will lead you to divert some of your advertising types of digital spending to the advertising listed below. Please use the sliders below to indicate, on a scale of 0 to 10, the extent to which you would divert (that is, increase) advertising spending for the coming year for the client you spend the most time on to each type of digital advertising that you just indicated. For each digital advertising type below, please select 0 if you expect to keep spending on that type of digital advertising for the coming year and 10 if you expect to substantially increase spending on that type of digital advertising.

		Total	Average Extent	Number of Respondents by Extent of Increase											Don't know
	Advertising Type	Respondents	of Increase	0	1	2	3	4	5	6	7	8	9	10	/ Unsure
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]
[1]	Social	113	6.8	-	-	6	6	5	11	12	24	26	11	11	1
[2]	Search	81	6.5	1	1	3	3	2	14	11	20	10	10	6	-
[3]	Digital Video	74	6.4	1	2	3	6	6	2	9	15	16	9	4	1
[4]	eCommerce Platforms	64	7.1	2	-	2	2	1	6	4	17	10	12	7	1
[5]	Connected TV	64	6.6	-	1	2	6	5	4	3	14	20	7	2	-
[6]	Direct Deals Display	62	6.8	3	-	3	4	3	3	4	11	11	9	10	1
[7]	Email	44	6.5	3	-	4	1	2	2	3	7	11	7	4	-
[8]	Digital Audio	41	6.7	2	-	2	-	5	4	1	6	10	8	3	-
[9]	App/In-app	38	7.2	2	-	-	-	-	5	1	10	11	3	5	1
[10]	Other	1	3.0	-	-	-	1	-	-	-	-	-	-	-	-

		Total	Average Extent	Share of Respondents by Extent of Increase											Don't know
	Advertising Type	Respondents	of Increase	0	1	2	3	4	5	6	7	8	9	10	/ Unsure
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]
[1]	Social	100%	n/a	0%	0%	5%	5%	4%	10%	11%	21%	23%	10%	10%	1%
[2]	Search	100%	n/a	1%	1%	4%	4%	2%	17%	14%	25%	12%	12%	7%	0%
[3]	Digital Video	100%	n/a	1%	3%	4%	8%	8%	3%	12%	20%	22%	12%	5%	1%
[4]	eCommerce Platforms	100%	n/a	3%	0%	3%	3%	2%	9%	6%	27%	16%	19%	11%	2%
[5]	Connected TV	100%	n/a	0%	2%	3%	9%	8%	6%	5%	22%	31%	11%	3%	0%
[6]	Direct Deals Display	100%	n/a	5%	0%	5%	6%	5%	5%	6%	18%	18%	15%	16%	2%
[7]	Email	100%	n/a	7%	0%	9%	2%	5%	5%	7%	16%	25%	16%	9%	0%
[8]	Digital Audio	100%	n/a	5%	0%	5%	0%	12%	10%	2%	15%	24%	20%	7%	0%
[9]	App/In-app	100%	n/a	5%	0%	0%	0%	0%	13%	3%	26%	29%	8%	13%	3%
[10]	Other	100%	n/a	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%

APPENDIX EXHIBIT 84

AGENCY SURVEY
EXTENT OF SPENDING CHANGES AS A RESULT OF PROGRAMMATIC DISPLAY COST INCREASE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Notes & Sources:
From Agency Survey.
Sorted in descending order based on column [B], except for "Other."
Respondents were shown their answer choices from Q5.
Respondents were only shown Q6 if they did not select "None of the above" or "Don't know/Unsure" in Q5.
Respondents can hover their mouse over each digital advertising type to review the type description.
Percentages calculated by dividing the number of people choosing the extent of increase for an advertising type by the total number of people selecting the advertising type to which to divert spending.
[C] Calculated as the average extent of increase in [D] through [N], weighted by the number of respondents.

APPENDIX EXHIBIT 85

AGENCY SURVEY
EXTENT OF SPENDING CHANGES AS A RESULT OF PROGRAMMATIC DISPLAY COST INCREASE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q6: In your previous answer, you indicated that the increase in the cost of programmatic display advertising will lead you to divert some of your advertising types of digital spending to the advertising listed below. Please use the sliders below to indicate, on a scale of 0 to 10, the extent to which you would divert (that is, increase) advertising spending for the coming year for the client you spend the most time on to each type of digital advertising that you just indicated. For each digital advertising type below, please select 0 if you expect to keep spending on that type of digital advertising for the coming year and 10 if you expect to substantially increase spending on that type of digital advertising.

		Total	Number of Respondents by Extent of Increase			Don't know
	Advertising Type	Respondents	0 – 3	4 – 6	7 – 10	/ Unsure
	[A]	[B]	[C]	[D]	[E]	[F]
[1]	Social	113	12	28	72	1
[2]	Search	81	8	27	46	-
[3]	Digital Video	74	12	17	44	1
[4]	eCommerce Platforms	64	6	11	46	1
[5]	Connected TV	64	9	12	43	-
[6]	Direct Deals Display	62	10	10	41	1
[7]	Email	44	8	7	29	-
[8]	Digital Audio	41	4	10	27	-
[9]	App/In-app	38	2	6	29	1
[10]	Other	1	1	-	-	-

		Total	Share of Respondents by Extent of Increase			Don't know
	Advertising Type	Respondents	0 – 3	4 – 6	7 – 10	/ Unsure
	[A]	[B]	[C]	[D]	[E]	[F]
[1]	Social	100%	11%	25%	64%	1%
[2]	Search	100%	10%	33%	57%	0%
[3]	Digital Video	100%	16%	23%	59%	1%
[4]	eCommerce Platforms	100%	9%	17%	72%	2%
[5]	Connected TV	100%	14%	19%	67%	0%
[6]	Direct Deals Display	100%	16%	16%	66%	2%
[7]	Email	100%	18%	16%	66%	0%
[8]	Digital Audio	100%	10%	24%	66%	0%
[9]	App/In-app	100%	5%	16%	76%	3%
[10]	Other	100%	100%	0%	0%	0%

APPENDIX EXHIBIT 85

AGENCY SURVEY
EXTENT OF SPENDING CHANGES AS A RESULT OF PROGRAMMATIC DISPLAY COST INCREASE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Notes & Sources:
From Agency Survey.
Sorted in descending order based on column [B], except for "Other."
Respondents were shown their answer choices from Q5.
Respondents were only shown Q6 if they did not select "None of the above" or "Don't know/Unsure" in Q5.
Respondents can hover their mouse over each digital advertising type to review the type description.
Percentages calculated by dividing the number of people choosing the extent of increase for an advertising type by the total number of people selecting the advertising type to which to divert spending.

APPENDIX EXHIBIT 86

AGENCY SURVEY
AD BUYING TOOLS USED IN PAST YEAR
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q7: An ad buying tool is a programmatic advertising platform that allows advertisers and media buying agencies to bid automatically on display ad inventory from a wide range of publishers. Some ad buying tools can also be used to buy video and search ad inventory. Ad buying tools include demand side platforms, or "DSPs." Which of the following ad buying tools, if any, have you used in the past year for programmatic display advertising for the client you spend the most time on? (Please select all that apply.)

		Total Respondents		< Than $15M Ad Spend		> Than $15M Ad Spend	
	Ad Buying Tool	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Google Ads	198	60%	115	61%	82	59%
[2]	Google DV360	137	41%	77	41%	59	42%
[3]	Amazon DSP	125	38%	69	36%	56	40%
[4]	The Trade Desk DSP	86	26%	45	24%	40	29%
[5]	Adobe Advertising Cloud	54	16%	35	18%	19	14%
[6]	Criteo	42	13%	20	11%	22	16%
[7]	Yahoo DSP (formerly Verizon Media DSP)	40	12%	24	13%	16	11%
[8]	MediaMath DSP	31	9%	21	11%	10	7%
[9]	Xandr Invest	26	8%	14	7%	12	9%
[10]	Simpli.fi	26	8%	12	6%	14	10%
[11]	Taboola	24	7%	15	8%	9	6%
[12]	Amobee	23	7%	12	6%	11	8%
[13]	Quantcast	21	6%	14	7%	7	5%
[14]	Adform	21	6%	13	7%	8	6%
[15]	StackAdapt	19	6%	14	7%	5	4%
[16]	Basis by Centro	18	5%	12	6%	6	4%
[17]	Zeta Global	16	5%	8	4%	8	6%
[18]	Outbrain	16	5%	13	7%	3	2%
[19]	Beeswax	12	4%	7	4%	5	4%
[20]	Adelphic	7	2%	5	3%	2	1%
[21]	Illumin (formerly AcuityAds)	5	2%	3	2%	2	1%
[22]	Ad Step Technologies	-	-	-	-	-	0%
[23]	Quorexx	-	-	-	-	-	0%
[24]	Other	7	2%	5	3%	2	1%
[25]	Don't know / Unsure	1	0%	1	1%	-	0%
[26]	Total Shown Question	331	100%	190	100%	140	100%

APPENDIX EXHIBIT 86

AGENCY SURVEY
AD BUYING TOOLS USED IN PAST YEAR
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Notes & Sources:
From Agency Survey.
Sorted in descending order based on column [B], except for "Other" and "Don't know / Unsure."
[D]-[G] Does not include one respondent who answered "Don't know / Unsure" to QS12.
Percentages do not add up to 100% because respondents can select multiple options.

APPENDIX EXHIBIT 87

AGENCY SURVEY
NUMBER OF AD BUYING TOOLS USED IN PAST YEAR
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q7: An ad buying tool is a programmatic advertising platform that allows advertisers and media buying agencies to bid automatically on display ad inventory from a wide range of publishers. Some ad buying tools can also be used to buy video and search ad inventory. Ad buying tools include demand side platforms, or "DSPs." Which of the following ad buying tools, if any, have you used in the past year for programmatic display advertising for the client you spend the most time on? (Please select all that apply.)

	Number of Ad Buying Tools Selected	Total Respondents		< Than $15M Ad Spend		> Than $15M Ad Spend	
		#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Zero	-	0%	-	0%	-	0%
[2]	One	96	29%	61	32%	35	25%
[3]	More than One	234	71%	128	67%	105	75%
[4]	Two	64	19%	26	14%	38	27%
[5]	Three	79	24%	47	25%	31	22%
[6]	Four or More	91	27%	55	29%	36	26%
[7]	Don't know / Unsure	1	0%	1	1%	-	0%
[8]	Total Shown Question	331	100%	190	100%	140	100%
[9]	Average # of Ad Buying Tools Selected	2.9		2.9		2.8	

Notes & Sources:
From Agency Survey.
[D]-[G] Does not include one respondent who answered "Don't know / Unsure" to QS12.
[9] Calculated as the average number of ad buying tools selected by respondents. Excludes respondents who selected "Don't know / Unsure."

APPENDIX EXHIBIT 88

AGENCY SURVEY
USE OF GOOGLE AD BUYING TOOLS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q7: An ad buying tool is a programmatic advertising platform that allows advertisers and media buying agencies to bid automatically on display ad inventory from a wide range of publishers. Some ad buying tools can also be used to buy video and search ad inventory. Ad buying tools include demand side platforms, or "DSPs." Which of the following ad buying tools, if any, have you used in the past year for programmatic display advertising for the client you spend the most time on? (Please select all that apply.)

		Total Respondents		< Than $15M Ad Spend		> Than $15M Ad Spend	
	Ad Buying Tool(s)	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Neither Google Ads nor Google DV360	87	26%	55	29%	32	23%
[2]	At least one of Google Ads and Google DV360	243	73%	134	71%	108	77%
[3]	Google Ads Only	106	32%	57	30%	49	35%
[4]	Google DV360 Only	45	14%	19	10%	26	19%
[5]	Both Google Ads and Google DV360	92	28%	58	31%	33	24%
[6]	Don't know / Unsure	1	0%	1	1%	-	0%
[7]	Total Shown Question	331	100%	190	100%	140	100%

Notes & Sources:
From Agency Survey.
[D]-[G] Does not include one respondent who answered "Don't know / Unsure" to QS12.

APPENDIX EXHIBIT 89

AGENCY SURVEY
GOOGLE USERS
NUMBER OF OTHER AD BUYING TOOLS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q7: An ad buying tool is a programmatic advertising platform that allows advertisers and media buying agencies to bid automatically on display ad inventory from a wide range of publishers. Some ad buying tools can also be used to buy video and search ad inventory. Ad buying tools include demand side platforms, or "DSPs." Which of the following ad buying tools, if any, have you used in the past year for programmatic display advertising for the client you spend the most time on? (Please select all that apply.)

		Google Ads Users			Google DV360 Users		
	# of Other Ad Buying Tools (Incl. Google Tools)	Total Respondents	< Than $15M Ad Spend	> Than $15M Ad Spend	Total Respondents	< Than $15M Ad Spend	> Than $15M Ad Spend
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	0	37	21	16	10	7	3
[2]	1	35	14	21	17	8	9
[3]	2	51	32	18	38	22	15
[4]	3	24	13	11	20	8	12
[5]	4+	51	35	16	52	32	20
[6]	Total Respondents	198	115	82	137	77	59
[7]	Average # of Other Ad Buying Tools	2.4	2.6	2.1	3.1	3.2	3.0

		Google Ads Users			Google DV360 Users		
	# of Other Ad Buying Tools (Incl. Google Tools)	Total Respondents	< Than $15M Ad Spend	> Than $15M Ad Spend	Total Respondents	< Than $15M Ad Spend	> Than $15M Ad Spend
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[8]	0	19%	18%	20%	7%	9%	5%
[9]	1	18%	12%	26%	12%	10%	15%
[10]	2	26%	28%	22%	28%	29%	25%
[11]	3	12%	11%	13%	15%	10%	20%
[12]	4+	26%	30%	20%	38%	42%	34%
[13]	Total Respondents	100%	100%	100%	100%	100%	100%

APPENDIX EXHIBIT 89

AGENCY SURVEY
GOOGLE USERS
NUMBER OF OTHER AD BUYING TOOLS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q7: An ad buying tool is a programmatic advertising platform that allows advertisers and media buying agencies to bid automatically on display ad inventory from a wide range of publishers. Some ad buying tools can also be used to buy video and search ad inventory. Ad buying tools include demand side platforms, or "DSPs." Which of the following ad buying tools, if any, have you used in the past year for programmatic display advertising for the client you spend the most time on? (Please select all that apply.)

		Google Ads Users			Google DV360 Users		
	# of Non-Google Ad Buying Tools	Total Respondents	< Than $15M Ad Spend	> Than $15M Ad Spend	Total Respondents	< Than $15M Ad Spend	> Than $15M Ad Spend
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[14]	0	45	26	19	18	12	6
[15]	1	52	26	25	34	20	13
[16]	2	42	21	21	29	11	18
[17]	3	27	21	6	23	16	7
[18]	4+	32	21	11	33	18	15
[19]	Total Respondents	198	115	82	137	77	59
[20]	Average # of Non-Google Ad Buying Tools	1.9	2.1	1.7	2.4	2.4	2.4

		Google Ads Users			Google DV360 Users		
	# of Non-Google Ad Buying Tools	Total Respondents	< Than $15M Ad Spend	> Than $15M Ad Spend	Total Respondents	< Than $15M Ad Spend	> Than $15M Ad Spend
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[21]	0	23%	23%	23%	13%	16%	10%
[22]	1	26%	23%	30%	25%	26%	22%
[23]	2	21%	18%	26%	21%	14%	31%
[24]	3	14%	18%	7%	17%	21%	12%
[25]	4+	16%	18%	13%	24%	23%	25%
[26]	Total Respondents	100%	100%	100%	100%	100%	100%

Notes & Sources:
From Agency Survey.
[C]-[D],[F]-[G] Does not include one respondent who answered "Don't know / Unsure" to QS12.
Percentages calculated by dividing the number of people choosing "Google Ads" or "Google DV360" for a given number of selected ad buying tools by the total number of people choosing "Google Ads" or "Google DV360."

APPENDIX EXHIBIT 90

AGENCY SURVEY
USE OF GOOGLE ADS AND OTHER AD BUYING TOOLS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q7: An ad buying tool is a programmatic advertising platform that allows advertisers and media buying agencies to bid automatically on display ad inventory from a wide range of publishers. Some ad buying tools can also be used to buy video and search ad inventory. Ad buying tools include demand side platforms, or "DSPs." Which of the following ad buying tools, if any, have you used in the past year for programmatic display advertising for the client you spend the most time on? (Please select all that apply.)

	Ad Buying Tool(s)	Total Respondents #	Total Respondents %
	[A]	[B]	[C]
[1]	Google Ads and At Least One Other Ad Buying Tool	161	81%
[2]	*Google Ads and DV360 Only*	*8*	*4%*
[3]	*Google Ads, DV360 and At Least One Non-Google Ad Buying Tool*	*84*	*42%*
[4]	*Google Ads Only and At Least One Non-Google Ad Buying Tool*	*69*	*35%*
[5]	Google Ads and No Other Ad Buying Tool	37	19%
[6]	Total Respondents Using Google Ads	198	100%

<u>Notes & Sources</u>:
From Agency Survey.
Limited to respondents who selected Google Ads in Q7.

APPENDIX EXHIBIT 91

AGENCY SURVEY
OTHER DIGITAL ADVERTISING TYPES USED BY RESPONDENTS WHO USE ONLY GOOGLE ADS FOR PROGRAMMATIC DISPLAY EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

QS14: Which of the following types of digital advertising, if any, have you used in the past year for the client you spend the most time on? Please review the description of each advertising type carefully. (Please select all that apply.)

	Other Digital Advertising Types Used	Respondents Who Use Google Ads and No Other Ad Buying Tools for Programmatic Display #	Respondents Who Use Google Ads and No Other Ad Buying Tools for Programmatic Display %	Respondents Who Use Google Ads and No Other Non-Google Ad Buying Tools for Programmatic Display #	Respondents Who Use Google Ads and No Other Non-Google Ad Buying Tools for Programmatic Display %
	[A]	[B]	[C]	[D]	[E]
[1]	Social	25	68%	33	73%
[1]	Search	24	65%	32	71%
[2]	Digital Video	21	57%	28	62%
[3]	Email	20	54%	25	56%
[4]	Connected TV	18	49%	21	47%
[5]	eCommerce Platforms	15	41%	17	38%
[6]	Digital Audio	14	38%	18	40%
[7]	App/In-App	11	30%	14	31%
[8]	Direct Display	10	27%	13	29%
[9]	Other	-	-	-	-
[10]	Total	37	100%	45	100%

Notes & Sources:

From Agency Survey.

Sorted in descending order based on column [B], except for "Other."

[A] Includes the non-programmatic display advertising types respondents selected in QS14 and QS15.

[B]-[C] Limited to respondents who selected Google Ads and no other ad buying tools (including Google DV360) in Q7.

[D]-[E] Limited to respondents who selected Google Ads and no other Non-Google ad buying tool in Q7.

APPENDIX EXHIBIT 92

AGENCY SURVEY
NUMBER OF OTHER DIGITAL ADVERTISING TYPES USED BY RESPONDENTS WHO USE ONLY GOOGLE ADS FOR PROGRAMMATIC DISPLAY EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

QS14: Which of the following types of digital advertising, if any, have you used in the past year for the client you spend the most time on? Please review the description of each advertising type carefully. (Please select all that apply.)

	Number of Other Digital Advertising Types Used	Respondents Who Use Google Ads and No Other Ad Buying Tools for Programmatic Display		Respondents Who Use Google Ads and No Other Non-Google Ad Buying Tools for Programmatic Display	
		#	%	#	%
	[A]	[B]	[C]	[D]	[E]
[1]	0	8	22%	8	18%
[2]	1	3	8%	3	7%
[3]	2	3	8%	4	9%
[4]	3	3	8%	4	9%
[5]	4	1	3%	4	9%
[6]	5	5	14%	5	11%
[7]	6	2	5%	2	4%
[8]	7	3	8%	3	7%
[9]	8	3	8%	4	9%
[10]	9	6	16%	8	18%
[11]	Total	37	100%	45	100%

Notes & Sources:
From Agency Survey.
[A] Counts the number of non-programmatic display advertising types respondents selected in QS14 and QS15.
[B]-[C] Limited to respondents who selected Google Ads and no other ad buying tools (including Google DV360) in Q7.
[D]-[E] Limited to respondents who selected Google Ads and no other Non-Google ad buying tools in Q7.

APPENDIX EXHIBIT 93

AGENCY SURVEY
PROGRAMMATIC DISPLAY ADVERTISING BUDGET SHARE
BY RESPONDENTS WHO USE ONLY GOOGLE ADS FOR PROGRAMMATIC DISPLAY
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q3: What is your best estimate of the share of the digital advertising budget of the client you spend the most time on that was used for each of these types of advertising in the past year? Specifically, please allocate 100% across the different types of digital advertising shown below based on the share of your client's total digital advertising budget spent on each type. The total should add up to 100%.

	% of Budget Allocated to Programmatic Display Advertising	Respondents Who Use Google Ads and No Other Ad Buying Tools for Programmatic Display		Respondents Who Use Google Ads and No Other Non-Google Ad Buying Tools for Programmatic Display	
		#	%	#	%
	[A]	[B]	[C]	[D]	[E]
	% of Digital Advertising Budget				
[1]	0% – 10%	10	27%	12	27%
[2]	10% – 20%	11	30%	14	31%
[3]	20% – 30%	4	11%	5	11%
[4]	30% – 40%	1	3%	2	4%
[5]	40% – 50%	-	0%	1	2%
[6]	50% – 60%	3	8%	3	7%
[7]	60% – 70%	-	0%	-	0%
[8]	70% – 80%	-	0%	-	0%
[9]	80% – 90%	-	0%	-	0%
[10]	90% – 100%	8	22%	8	18%
[11]	Don't know / Unsure	-	0%	-	0%
[12]	Total	37	100%	45	100%
	% of Overall Advertising Budget				
[13]	0% – 10%	15	41%	18	40%
[14]	10% – 20%	7	19%	9	20%
[15]	20% – 30%	4	11%	5	11%
[16]	30% – 40%	4	11%	6	13%
[17]	40% – 50%	3	8%	3	7%
[18]	50% – 60%	3	8%	3	7%
[19]	60% – 70%	-	0%	-	0%
[20]	70% – 80%	-	0%	-	0%
[21]	80% – 90%	1	3%	1	2%
[22]	90% – 100%	-	0%	-	0%
[23]	Don't know / Unsure	-	0%	-	0%
[24]	Total	37	100%	45	100%

APPENDIX EXHIBIT 93

AGENCY SURVEY
PROGRAMMATIC DISPLAY ADVERTISING BUDGET SHARE
BY RESPONDENTS WHO USE ONLY GOOGLE ADS FOR PROGRAMMATIC DISPLAY
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Notes & Sources:
From Agency Survey.
[B]-[C] Limited to respondents who selected Google Ads and no other ad buying tools (including Google DV360) in Q7.
[D]-[E] Limited to respondents who selected Google Ads and no other Non-Google ad buying tools in Q7.
[13]-[23] Calculated as the % of budget allocated to programmatic display in Q3 * the % of budget allocated to online advertising in QS13.

APPENDIX EXHIBIT 94

AGENCY SURVEY
CHANGE IN AD BUYING TOOL USE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q9: Do you expect to use the same number, more, or fewer ad buying tools for programmatic display advertising next year for the client you spend the most time on? (Please select only one option.)

	Response Options	#	%
	[A]	[B]	[C]
[1]	More	62	19%
[2]	Fewer	76	23%
[3]	Same Number	186	56%
[4]	Don’t know / Unsure	6	2%
[5]	Total Shown Question	330	100%

Notes & Sources:
From Agency Survey.
Respondents were show Q9 if they did not select “Don’t know / Unsure” in Q7.

APPENDIX EXHIBIT 95

AGENCY SURVEY
FACTORS CONSIDERED WHEN CHOOSING AD BUYING TOOLS FOR PROGRAMMATIC DISPLAY ADVERTISING EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q11: Which of the following factors, if any, do you consider when deciding to use a particular ad buying tool for programmatic display advertising for the client you spend the most time on? (Please select all that apply.)

	Factor	Respondents Indicating the Factor was Considered #	%
	[A]	[B]	[C]
[1]	Targeting criteria and capabilities	159	48%
[2]	Media optimization of placements during a campaign	156	47%
[3]	Cost	152	46%
[4]	Ad placement effectiveness	151	46%
[5]	Audience scale/Reach	151	46%
[6]	Ease of use/User interface	133	40%
[7]	Reporting features	131	40%
[8]	Brand safety/fraud protection	118	36%
[9]	API and integrations	105	32%
[10]	Budget management tools	97	29%
[11]	Forecasting tools	96	29%
[12]	Support	94	28%
[13]	Identity management	71	22%
[14]	Troubleshooting capabilities	58	18%
[15]	Other	2	1%
[16]	Don’t know / Unsure	1	0%
[17]	Total Shown Question	330	100%

Notes & Sources:
From Agency Survey.
Sorted in descending order based on column [B], except for “Other” and “Don’t know / Unsure.”
Respondents were show Q11 if they did not select “Don’t know / Unsure” in Q7.
Percentages do not add up to 100% because respondents can select multiple options.

APPENDIX EXHIBIT 96

AGENCY SURVEY
DISCONTINUATION OF AD BUYING TOOL USE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q12: Have you stopped using any ad buying tool(s) for programmatic display advertising in the past year for the client you spend the most time on? (Please select only one option.)

	Response Options	#	%
	[A]	[B]	[C]
[1]	Yes	73	22%
[2]	No	250	76%
[3]	Don’t know / Unsure	7	2%
[4]	Total Shown Question	330	100%

Notes & Sources:
From Agency Survey.
Respondents were show Q12 if they did not select “Don’t know / Unsure” in Q7.

APPENDIX EXHIBIT 97

AGENCY SURVEY
REASONS FOR STARTING USE OF AT LEAST ONE AD BUYING TOOL
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q14: Have you started using any ad buying tool(s) in the past year for programmatic display advertising for the client you spend the most time on? (Please select only one option.)

	Response Options	#	%
	[A]	[B]	[C]
[1]	Yes	96	29%
[2]	No	228	69%
[3]	Don’t know / Unsure	6	2%
[4]	Total Shown Question	330	100%

Notes & Sources:
From Agency Survey.
Respondents were show Q14 if they did not select “Don’t know / Unsure” in Q7.

APPENDIX EXHIBIT 98

AGENCY SURVEY
PERFORMANCE ASSESSMENT METRICS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q16: Which of the following metrics, if any, do you use to assess the performance of programmatic display ads, direct deals display ads, social media ads, and/or digital video ads for the client you spend the most time on? (Please select all that apply in each column.)

		Programmatic Display Ads		Direct Deals Display Ads		Social Media Ads		Digital Video Ads	
	Metric	#	%	#	%	#	%	#	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]
[1]	Conversions	165	50%	66	43%	139	55%	89	41%
[2]	Return on Investment (ROI)	165	50%	62	40%	118	46%	93	43%
[3]	Return on Ad Spend (ROAS)	154	47%	73	47%	139	55%	92	43%
[4]	Cost per click (CPC)	149	45%	77	50%	128	50%	74	34%
[5]	Impressions	148	45%	64	42%	123	48%	107	50%
[6]	Cost per impression (CPM)	143	43%	72	47%	118	46%	113	53%
[7]	Click through rate (CTR)	142	43%	75	49%	141	55%	87	40%
[8]	Cost per action (CPA)	126	38%	66	43%	126	49%	75	35%
[9]	Clicks	121	37%	58	38%	107	42%	76	35%
[10]	Other	8	2%	3	2%	8	3%	14	7%
[11]	None of the above	-	0%	1	1%	-	0%	-	0%
[12]	Don’t know / Unsure	1	0%	2	1%	1	0%	2	1%
[13]	Total Shown Question	331	100%	154	100%	255	100%	215	100%

Notes & Sources:
From Agency Survey.
Sorted in descending order based on column [B], except for “None of the above” and “Don’t know / Unsure.”
Respondents were only asked about each of the above advertising types if they had indicated in QS14 and QS15 that the client they spend the most time on used those advertising types in the past year.
Percentages do not add up to 100% because respondents can select multiple options.

APPENDIX EXHIBIT 99

AGENCY SURVEY
PERFORMANCE ASSESSMENT METRICS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q17: You indicated that you use the following metrics to assess the performance of programmatic display ads for the client you spend the most time on. Please rank these metrics in terms of how important they are to accurately assessing the performance of programmatic display ads, with 1 being the most important and [NUMBER OF MEASURES SELECTED IN Q16] being the least important. (Please rank the following metrics, or select "Don't know / Unsure".)

		Respondents Ranking Metric As Most Important		Respondents Ranking Metric Among the Top 3 Most Important	
	Metric	#	%	#	%
	[A]	[B]	[C]	[D]	[E]
[1]	Return on Investment (ROI)	74	22%	141	43%
[2]	Return on Ad Spend (ROAS)	49	15%	121	37%
[3]	Conversions	40	12%	119	36%
[4]	Cost per action (CPA)	34	10%	87	26%
[5]	Cost per impression (CPM)	31	9%	82	25%
[6]	Impressions	29	9%	73	22%
[7]	Clicks	26	8%	58	18%
[8]	Click through rate (CTR)	22	7%	87	26%
[9]	Cost per click (CPC)	21	6%	73	22%
[10]	Other	3	1%	7	2%
[11]	Total	329	100%	329	100%

Notes & Sources:
From Agency Survey.
Sorted in descending order based on column [B], except for "Other."
Respondents were only shown Q17 if they indicate that they used more than one metric to assess the performance of programmatic display ads in Q16. Respondents who selected only one metric in Q16 are assumed to have that metric ranked as most important. Total includes respondents who ranked metrics in Q17 or selected only one metric in Q16.
1 respondent (less than 1% of respondents who selected at least one metric to assess the performace of programmatic display ads) selected "Don't know / Unsure."

APPENDIX EXHIBIT 100

AGENCY SURVEY
FREQUENCY OF PERFORMANCE ASSESSMENT
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q18: How often, if at all, do you measure or assess the performance of the programmatic display advertising for the client you spend the most time on? (Please select only one option.)

	Frequency	#	%
	[A]	[B]	[C]
[1]	Daily	32	10%
[2]	Weekly	132	40%
[3]	Monthly	109	33%
[4]	Quarterly	46	14%
[5]	Annually	12	4%
[6]	Don’t know / Unsure	-	0%
[7]	Total Shown Question	331	100%

Notes & Sources:
From Agency Survey.

APPENDIX EXHIBIT 101

AGENCY SURVEY
EXPERIMENTS ON PROGRAMMATIC DISPLAY ADS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q19: In the past year, have you run any experiments or test & learn initiatives to assess the performance of the programmatic display ads for the client you spend the most time on? (Please select only one option.)

	Response Options	#	%
	[A]	[B]	[C]
[1]	Yes	202	61%
[2]	No	114	34%
[3]	Don’t know / Unsure	15	5%
[4]	Total Shown Question	331	100%

Notes & Sources:
From Agency Survey.

APPENDIX EXHIBIT 102

AGENCY SURVEY
TYPES OF EXPERIMENTS ON PROGRAMMATIC DISPLAY ADS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Q20: Which of the following types of experiments or test & learn initiatives, if any, have you run in the past year to assess the performance of the programmatic display ads for the client you spend the most time on?

	Experiment Type	#	%
	[A]	[B]	[C]
[1]	Audiences	133	66%
[2]	Creatives	121	60%
[3]	ROI/ROAS	103	51%
[4]	Bid strategies	97	48%
[5]	Ad buying tool performance	91	45%
[6]	Publishers	54	27%
[7]	Other	1	0%
[8]	Don’t know / Unsure	-	0%
[9]	Total Shown Question	202	100%

<u>Notes & Sources</u>:
From Agency Survey.
Sorted in descending order based on column [B], except for “Other” and “Don’t know / Unsure.”
Percentages do not add up to 100% because respondents can select multiple options.
Respondents were only shown Q20 if they indicated in Q19 that they had conducted experiments or test & learn initiatives on their programmatic display ads in the past year.

APPENDIX EXHIBIT 103

SENSITIVITY ANALYSIS BY RESPONDENT DEMOGRAPHIC EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

	Response Options	Complete Sample Survey Results	Gender		Age				Region			
			Female	Male	18 – 34	35 – 49	50 – 64	65+	NE	MW	S	W
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
	Higher-Spend Advertiser Survey											
[1]	Will Divert Spending	58%	63%	56%	63%	57%	55%	n/a	65%	51%	54%	60%
[2]	Used Multiple Ad Buying Tools	74%	75%	74%	73%	74%	73%	n/a	82%	81%	73%	67%
[3]	Sample Size (N)	453	122	331	88	301	64	-	99	63	142	149
	Lower-Spend Advertiser Survey											
[4]	Will Divert Spending	59%	51%	60%	57%	60%	55%	n/a	52%	69%	56%	59%
[5]	Used Multiple Display Platforms	77%	61%	81%	77%	77%	82%	n/a	70%	87%	75%	78%
[6]	Sample Size (N)	243	41	202	44	177	22	-	44	54	96	49
	Agency Survey											
[7]	Will Divert Spending	56%	52%	58%	65%	53%	51%	100%	59%	67%	55%	50%
[8]	Used Multiple Ad Buying Tools	71%	79%	67%	73%	68%	77%	100%	83%	75%	71%	59%
[9]	Sample Size (N)	331	105	225	84	203	43	1	86	36	104	105

Notes & Sources:

From Higher-Spend Advertiser, Lower-Spend Advertiser, and Agency Surveys.

[1] Respondents who, in Q5 of the Higher-Spend Advertiser Survey, indicated that they would divert advertising spending as a response to an increase in the cost of programmatic display advertising.

[2] Respondents who, in Q8 of the Higher-Spend Advertiser Survey, selected more than one ad buying tool.

[4] Respondents who, in Q9 of the Lower-Spend Advertiser Survey, indicated that they would divert advertising spending as a response to an increase in the cost of display advertising.

[5] Respondents who, in Q4 of the Lower-Spend Advertiser Survey, selected more than one display platform.

[7] Respondents who, in Q4 of the Agency Survey, indicated that they would divert advertising spending for the client they spend the most time on as a response to an increase in the cost of programmatic display advertising.

[8] Respondents who, in Q7 of the Agency Survey, selected more than one ad buying tool for the client they spend the most time on.

[C]-[D] From QS4 in Higher-Spend Advertiser Survey, QS4 in Lower-Spend Advertiser Survey, and QS4 in Agency Survey.

[E]-[H] From QS3 in Higher-Spend Advertiser Survey, QS3 in Lower-Spend Advertiser Survey, and QS3 in Agency Survey.

[I]-[L] From QS5 in Higher-Spend Advertiser Survey, QS5 in Lower-Spend Advertiser Survey, and QS5 in Agency Survey. Each respondent's state of residence is categorized into regions based on the U.S census regions. See Census Regions and Divisions of the United States, U.S. Census Bureau, available at https://www2.census.gov/geo/pdfs/maps-data/maps/reference/us_regdiv.pdf.

APPENDIX EXHIBIT 104

SENSITIVITY ANALYSIS BY RESPONDENT ANNUAL AD SPEND
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

			Annual Ad Spend															
	Response Options	Complete Sample Survey Results	Less than $10K	$10K to $25K	$25K to $50K	$50K to $100K	$100K to $250K	$250K to $500K	$500K to $1M	$1M to $3M	$3M to $7M	$7M to $15M	$15M to $30M	$30M to $50M	$50M to $100M	$100M to $250M	$250M to $500M	$500M+
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]	[P]	[Q]	[R]
	Higher-Spend Advertiser Survey																	
[1]	Will Divert Spending	58%	n/a	n/a	n/a	n/a	n/a	n/a	61%	57%	55%	63%	59%	53%	58%	61%	47%	56%
[2]	Used Multiple Ad Buying Tools	74%	n/a	n/a	n/a	n/a	n/a	n/a	58%	61%	63%	85%	84%	75%	74%	82%	93%	78%
[3]	Sample Size (N)	453	n/a	n/a	n/a	n/a	n/a	n/a	31	76	56	81	68	51	38	28	15	9
	Lower-Spend Advertiser Survey																	
[4]	Will Divert Spending	59%	67%	76%	63%	58%	51%	43%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
[5]	Used Multiple Display Platforms	77%	67%	86%	72%	81%	81%	72%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
[6]	Sample Size (N)	243	6	51	60	26	47	53	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Agency Survey																	
[7]	Will Divert Spending	56%	-	-	-	80%	71%	83%	61%	60%	52%	51%	53%	39%	63%	68%	60%	57%
[8]	Used Multiple Ad Buying Tools	71%	-	-	-	60%	71%	50%	68%	72%	56%	82%	68%	79%	94%	64%	80%	100%
[9]	Sample Size (N)	331	-	-	-	5	7	6	28	43	62	39	57	33	16	22	5	7

Notes & Sources:

From Higher-Spend Advertiser, Lower-Spend Advertiser, and Agency Surveys.

[1] Respondents who, in Q5 of the Higher-Spend Advertiser Survey, indicated that they would divert advertising spending as a response to an increase in the cost of programmatic display advertising.

[2] Respondents who, in Q8 of the Higher-Spend Advertiser Survey, selected more than one ad buying tool.

[4] Respondents who, in Q9 of the Lower-Spend Advertiser Survey, indicated that they would divert advertising spending as a response to an increase in the cost of display advertising.

[5] Respondents who, in Q4 of the Lower-Spend Advertiser Survey, selected more than one display platform.

[7] Respondents who, in Q4 of the Agency Survey, indicated that they would divert advertising spending for the client they spend the most time on as a response to an increase in the cost of programmatic display advertising.

[8] Respondents who, in Q7 of the Agency Survey, selected more than one ad buying tool for the client they spend the most time on.

[C]-[R] From QS10 in Higher-Spend Advertiser Survey, QS10 in Lower-Spend Advertiser Survey, and QS12 in Agency Survey. Agency Results do not include one respondent who answered “Don’t know / Unsure” to QS12.

APPENDIX EXHIBIT 105

SENSITIVITY ANALYSIS BY RESPONDENT SURVEY COMPLETION TIME EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

		Survey Results in Sample that Excludes Completion Time Outliers		Test of H_0	
	Response Options	1.67 Minutes - 3 Hours	3 Minutes - 2 Hours	z-score	p-value
	[A]	[B]	[C]	[D]	[E]
	Higher-Spend Advertiser Survey				
[1]	Will Divert Spending	58%	62%	-1.35	0.18
[2]	Used Multiple Ad Buying Tools	74%	81%	-2.56**	0.01
[3]	Sample Size (N)	453	409		
	Lower-Spend Advertiser Survey				
[4]	Will Divert Spending	59%	63%	-1.02	0.31
[5]	Used Multiple Display Platforms	77%	83%	-1.56	0.12
[6]	Sample Size (N)	243	219		
	Agency Survey				
[7]	Will Divert Spending	56%	58%	-0.55	0.58
[8]	Used Multiple Ad Buying Tools	71%	74%	-0.80	0.43
[9]	Sample Size (N)	331	317		

Notes & Sources:

From Higher-Spend Advertiser, Lower-Spend Advertiser, and Agency Surveys.

[1] Respondents who, in Q5 of the Higher-Spend Advertiser Survey, indicated that they would divert advertising spending as a response to an increase in the cost of programmatic display advertising.

[2] Respondents who, in Q8 of the Higher-Spend Advertiser Survey, selected more than one ad buying tool.

[4] Respondents who, in Q9 of the Lower-Spend Advertiser Survey, indicated that they would divert advertising spending as a response to an increase in the cost of display advertising.

[5] Respondents who, in Q4 of the Lower-Spend Advertiser Survey, selected more than one display platform.

[7] Respondents who, in Q4 of the Agency Survey, indicated that they would divert advertising spending for the client they spend the most time on as a response to an increase in the cost of programmatic display advertising.

APPENDIX EXHIBIT 105

SENSITIVITY ANALYSIS BY RESPONDENT SURVEY COMPLETION TIME EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Notes & Sources (continued):

[8] Respondents who, in Q7 of the Agency Survey, selected more than one ad buying tool for the client they spend the most time on.

[B] Limited to respondents with qtime between 1.67 minutes (100 seconds) and 3 hours (10,800 seconds).

[C] Limited to respondents with qtime between 3 minutes (180 seconds) and 2 hours (7,200 seconds).

[D] Significance tests reflect the difference in the percentage of respondents in columns [B] and [C] saying they will divert spending or use multiple ad tools, between outlier completion time exclusions. The z-scores are based on a two-tailed test with $z = (p_1 - p_2) / \text{sqrt} (p_1 \times (1 - p_1) / n_1 + p_2 \times (1 - p_2) / n_2)$; a z-score of ±1.96, for example, corresponds to a significance at the 95% confidence level. One asterisk (*) denotes significance at the 0.1 level with $p < 0.1$ and two asterisks (**) denote significance at the 0.05 level with $p < 0.05$.

[E] Reflects significance levels of the difference of percentages in [B] and [C].

APPENDIX EXHIBIT 106

SUMMARY OF SELECTED RESULTS ACROSS SURVEYS EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

		Higher-Spend Advertiser Survey		Lower-Spend Advertiser Survey		Test of H_0	
	Survey Results	%	N	%	N	z-score	p-value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Respondents Who Would Divert Spending	58%	453	59%	243	-0.26	0.79
[2]	Respondents Who Use More Than One Advertising Type	85%	453	84%	243	0.65	0.52
[3]	Respondents Who Use More Than One Ad Buying Tool/Display Platform	74%	453	77%	243	-1.01	0.31
[4]	Google Ads Users Using At Least One Other Non-Google Ad Buying Tool/Display Platform	75%	305	76%	155	-0.17	0.87

		Higher-Spend Advertiser Survey		Agency Survey		Test of H_0	
	Survey Results	%	N	%	N	z-score	p-value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[5]	Respondents Who Would Divert Spending	58%	453	56%	331	0.54	0.59
[6]	Respondents Who Use More Than One Advertising Type	85%	453	86%	331	-0.39	0.70
[7]	Respondents Who Use More Than One Ad Buying Tool	74%	453	71%	331	1.00	0.32
[8]	Google Ads Users Using At Least One Other Non-Google Ad Buying Tool	75%	305	77%	198	-0.48	0.63

		Lower-Spend Advertiser Survey		Agency Survey		Test of H_0	
	Survey Results	%	N	%	N	z-score	p-value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[9]	Respondents Who Would Divert Spending	59%	243	56%	331	0.71	0.48
[10]	Respondents Who Use More Than One Advertising Type	84%	243	86%	331	-0.94	0.35
[11]	Respondents Who Use More Than One Ad Buying Tool/Display Platform	77%	243	71%	331	1.82*	0.07
[12]	Google Ads Users Using At Least One Other Non-Google Ad Buying Tool/Display Platform	76%	155	77%	198	-0.25	0.80

APPENDIX EXHIBIT 106

SUMMARY OF SELECTED RESULTS ACROSS SURVEYS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Notes & Sources:

From Higher-Spend Advertiser, Lower-Spend Advertiser, and Agency Surveys.

[1] Respondents who, in Q5 of the Higher-Spend Advertiser Survey and Q9 of the Lower-Spend Advertiser Survey, indicated that they would divert advertising spending as a response to an increase in the cost of display advertising. In the Higher-Spend Advertiser Survey, this question referred to programmatic display advertising specifically.

[2] Respondents who, in QS12 of the Higher- and Lower-Spend Advertiser Surveys, indicated that they have used more than one type of digital advertising in the past year.

[3] Respondents who, in Q8 of the Higher-Spend Advertiser Survey and Q4 of the Lower-Spend Advertiser Survey, selected more than one ad buying tool/display platform

[4] Respondents who, in Q8 of the Higher-Spend Advertiser Survey and Q4 of the Lower-Spend Advertiser Survey, indicated using Google Ads, and who selected more than one non-Google ad buying tool/display platform.

[5] Respondents who, in Q5 of the Higher-Spend Advertiser Survey and Q4 of the Agency Survey, indicated that they would divert advertising spending as a response to an increase in the cost of programmatic display advertising. In the Agency Survey, respondents were asked to answer the question for the client they spend the most time on.

[6] Respondents who, in QS12 of the Higher-Advertiser Survey and QS14 of the Agency Survey, indicated that they have used more than one type of digital advertising in the past year. In the Agency Survey, respondents were asked to answer the question for the client they spend the most time on.

[7] Respondents who, in Q8 of the Higher-Spend Advertiser Survey and Q7 of the Agency Survey, selected more than one ad buying tool. In the Agency Survey, respondents were asked to answer the question for the client they spend the most time on.

[8] Respondents who, in Q8 of the Higher-Spend Advertiser Survey and Q7 of the Agency Survey, indicated using Google Ads, and who selected more than one non-Google ad buying tool. In the Agency Survey, respondents were asked to answer the question for the client they spend the most time on.

[9] Respondents who, in Q4 of the Agency Survey and Q9 of the Lower-Spend Advertiser Survey, indicated that they would divert advertising spending as a response to an increase in the cost of display advertising. In the Agency Survey, this referred to programmatic display advertising specifically. In the Agency Survey, respondents were asked to answer the question for the client they spend the most time on.

[10] Respondents who, in QS14 of the Agency Survey and QS12 of the Lower-Spend Advertiser Survey, indicated that they have used more than one type of digital advertising in the past year. In the Agency Survey, respondents were asked to answer the question for the client they spend the most time on.

[11] Respondents who, in Q7 of the Agency Survey and Q4 of the Lower-Spend Advertiser Survey, selected more than one ad buying tool/display platform. In the Agency Survey, respondents were asked to answer the question for the client they spend the most time on.

[12] Respondents who, in Q7 of the Agency Survey and Q4 of the Lower-Spend Advertiser Survey, indicated using Google Ads, and who selected more than one non-Google ad buying tool/display platform. In the Agency Survey, respondents were asked to answer the question for the client they spend the most time on.

APPENDIX EXHIBIT 106

SUMMARY OF SELECTED RESULTS ACROSS SURVEYS EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

Notes & Sources (continued):

[F] Significance tests reflect the difference in the survey results in columns [B] and [D] across the Higher-Spend Advertiser, Lower-Spend Advertiser, and Agency Surveys. The z-scores are based on a two-tailed test with $z = (p_1 - p_2) / \text{sqrt} (p_1 \times (1 - p_1) / n_1 + p_2 \times (1 - p_2) / n_2)$; a z-score of ±1.96, for example, corresponds to a significance at the 95% confidence level. One asterisk (*) denotes significance at the 0.1 level with $p < 0.1$ and two asterisks (**) denote significance at the 0.05 level with $p < 0.05$.

[G] Reflects significance levels of the difference of percentages in [B] and [D].

APPENDIX EXHIBIT 107

LOWER-SPEND ADVERTISER SURVEY
SUMMARY OF SELECTED RESULTS
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

		Full Sample		< Than $50K Ad Spend		Test of H_0	
	Survey Results	%	N	%	N	z-score	p-value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	Respondents Who Would Divert Spending	59%	243	69%	117	-1.96*	0.05
[2]	Respondents Who Use More Than One Advertising Type	84%	243	78%	117	1.27	0.20
[3]	Respondents Who Use More Than One Display Platform	77%	243	78%	117	-0.09	0.93
[4]	Google Ads Users Using At Least One Other Non-Google Display Platform	76%	155	78%	74	-0.38	0.70

Notes & Sources:
From Lower-Spend Advertiser Survey.
[1] Respondents who, in Q9, indicated that they would divert advertising spending as a response to an increase in the cost of display advertising.
[2] Respondents who, in QS12, indicated that they have used more than one type of digital advertising in the past year.
[3] Respondents who, in Q4, selected more than one display platform.
[4] Respondents who, in Q4, indicated using Google Ads, and who selected more than one non-Google display platform.
[B]-[C] Full respondent sample.
[D]-[E] Limited to respondents with an annual ad spend of less than $50,000.
[F] Significance tests reflect the difference in the survey results in columns [B] and [D]. The z-scores are based on a two-tailed test with $z = (p_1 - p_2) / \text{sqrt} (p_1 \times (1 - p_1) / n_1 + p_2 \times (1 - p_2) / n_2)$; a z-score of ±1.96, for example, corresponds to a significance at the 95% confidence level. One asterisk (*) denotes significance at the 0.1 level with p<0.1 and two asterisks (**) denote significance at the 0.05 level with p <0.05.
[G] Reflects significance levels of the difference of percentages in [B] and [D].

APPENDIX EXHIBIT 108

HIGHER-SPEND ADVERTISER SURVEY
COMPARISON OF RESPONDENTS WHO WOULD DIVERT VS. WOULD NOT DIVERT SPENDING IN RESPONSE TO PROGRAMMATIC DISPLAY COST INCREASE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

	Respondent Subgroup	Would Divert Spending in Q5 (N = 262)	Would Not Divert Spending in Q5 (N = 164)
	[A]	[B]	[C]
	Age		
[1]	18 - 34	21.0%	16.5%
[2]	35 - 49	65.6%	71.3%
[3]	50 - 64	13.4%	12.2%
[4]	65 or above	-	-
	Gender		
[5]	Female	29.4%	19.5%
[6]	Male	70.6%	80.5%
	Percent of Advertising Budget Spent on Digital		
[7]	Average	67.5%	65.1%
[8]	Median	70.0%	65.5%
	Annual Ad Spend		
[9]	$500,000 to less than $1 million	7.3%	5.5%
[10]	$1 million to less than $3 million	16.4%	17.1%
[11]	$3 million to less than $7 million	11.8%	12.8%
[12]	$7 million to less than $15 million	19.5%	15.9%
[13]	$15 million to less than $30 million	15.3%	14.6%
[14]	$30 million to less than $50 million	10.3%	13.4%
[15]	$50 million to less than $100 million	8.4%	8.5%
[16]	$100 million to less than $250 million	6.5%	6.1%
[17]	$250 million to less than $500 million	2.7%	4.3%
[18]	$500 million or more	1.9%	1.8%

APPENDIX EXHIBIT 108

HIGHER-SPEND ADVERTISER SURVEY
COMPARISON OF RESPONDENTS WHO WOULD DIVERT VS. WOULD NOT DIVERT SPENDING IN RESPONSE TO PROGRAMMATIC DISPLAY COST INCREASE EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

	Respondent Subgroup	Would Divert Spending in Q5 (N = 262)	Would Not Divert Spending in Q5 (N = 164)
	[A]	[B]	[C]
	Advertising Types Used		
[19]	Search	84.0%	64.6%
[20]	Display	100.0%	100.0%
[21]	Email	71.0%	47.6%
[22]	Digital Audio	44.3%	33.5%
[23]	Social	85.1%	64.0%
[24]	App/In-App	51.5%	34.8%
[25]	Digital Video	71.8%	56.7%
[26]	Connected TV	50.4%	39.6%
[27]	eCommerce	59.9%	46.3%
[28]	Other	0.8%	-
[29]	***Average Number of Advertising Types Used***	6.2	4.9
	Use of Direct Deals		
[30]	Uses Direct Deals	63.0%	51.8%
[31]	Does Not Use Direct Deals	37.0%	48.2%
	Use of Ad Agency		
[32]	Uses Ad Agency	72.1%	61.0%
[33]	Does Not Use Ad Agency	27.5%	39.0%
[34]	***Average % of Digital Budget Allocated to Programmatic Display***	20.8%	39.7%
[35]	***Use of Multiple Ad Buying Tools***	84.7%	59.8%
	Metrics Used to Measure Performance of Programmatic Display		
[36]	ROI	51.1%	45.7%
[37]	ROAS	51.5%	42.1%

APPENDIX EXHIBIT 108

HIGHER-SPEND ADVERTISER SURVEY
COMPARISON OF RESPONDENTS WHO WOULD DIVERT VS. WOULD NOT DIVERT SPENDING IN RESPONSE TO PROGRAMMATIC DISPLAY COST INCREASE EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

	Respondent Subgroup	Would Divert Spending in Q5 (N = 262)	Would Not Divert Spending in Q5 (N = 164)
	[A]	[B]	[C]
	Frequency of Measuring Performance		
[38]	Daily	13.7%	11.6%
[39]	Weekly	34.0%	39.6%
[40]	Monthly	27.1%	29.3%
[41]	Quarterly	21.0%	14.6%
[42]	Annually	3.4%	4.3%
	Use of Experiments		
[43]	Has run experiments in past year	69.1%	40.2%
[44]	Has not run experiments in past year	27.1%	58.5%

Notes & Sources:
From Higher-Spend Advertiser Survey.
[B] Respondents who, in Q5, indicated that they would divert advertising spending as a response to an increase in the cost of programmatic display advertising.
[C] Respondents who, in Q5, indicated that they would not divert advertising spending as a response to an increase in the cost of programmatic display advertising.
[1]-[4] Computed based on responses to QS3.
[5]-[6] Computed based on responses to QS4.
[7]-[8] Computed based on responses to QS11.
[9]-[18] Computed based on responses to QS10.
[19]-[29] Computed based on responses to QS12.
[30]-[31] Computed based on responses to QS13.
[32]-[33] Computed based on responses to Q2.
[34] Computed based on responses to Q4.
[35] Computed based on responses to Q8.
[36]-[37] Computed based on responses to Q17.
[38]-[42] Computed based on responses to Q19.
[43]-[44] Computed based on responses to Q20.

APPENDIX EXHIBIT 109

LOWER-SPEND ADVERTISER SURVEY
COMPARISON OF RESPONDENTS WHO WOULD DIVERT VS. WOULD NOT DIVERT SPENDING IN RESPONSE TO DISPLAY COST INCREASE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

	Respondent Subgroup	Would Divert Spending in Q9 (N = 143)	Would Not Divert Spending in Q9 (N = 87)
	[A]	[B]	[C]
	Age		
[1]	18 - 34	17.5%	18.4%
[2]	35 - 49	74.1%	77.0%
[3]	50 - 64	8.4%	4.6%
[4]	65 or above	-	-
	Gender		
[5]	Female	14.7%	18.4%
[6]	Male	85.3%	81.6%
	Percent of Advertising Budget Spent on Digital Advertising		
[7]	Average	64.5%	57.5%
[8]	Median	65.0%	60.0%
	Annual Ad Spend		
[9]	Less than $10,000	2.8%	1.1%
[10]	$10,000 to less than $25,000	27.3%	12.6%
[11]	$25,000 to less than $50,000	26.6%	24.1%
[12]	$50,000 to less than $100,000	10.5%	12.6%
[13]	$100,000 to less than $250,000	16.8%	21.8%
[14]	$250,000 to less than $500,000	16.1%	27.6%

APPENDIX EXHIBIT 109

LOWER-SPEND ADVERTISER SURVEY
COMPARISON OF RESPONDENTS WHO WOULD DIVERT VS. WOULD NOT DIVERT SPENDING IN RESPONSE TO DISPLAY COST INCREASE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

	Respondent Subgroup	Would Divert Spending in Q9 (N = 143)	Would Not Divert Spending in Q9 (N = 87)
	[A]	[B]	[C]
	Advertising Types Used		
[15]	Search	65.0%	55.2%
[16]	Display	100.0%	100.0%
[17]	Email	43.4%	41.4%
[18]	Digital Audio	39.2%	39.1%
[19]	Social	70.6%	58.6%
[20]	App/In-App	32.9%	37.9%
[21]	Digital Video	47.6%	49.4%
[22]	Connected TV	30.8%	36.8%
[23]	eCommerce	36.4%	40.2%
[24]	Other	0.7%	-
[25]	***Average Number of Advertising Types Used***	4.7	4.6
	Use of Ad Agency		
[26]	Uses Agency	73.4%	48.3%
[27]	Does Not Use Agency	26.6%	51.7%
[28]	***Average % of Digital Budget Allocated to Display***	32.7%	42.0%
[29]	***Use of Multiple Display Platforms***	88.1%	62.1%
	Metrics Used to Measure Performance of Display		
[30]	ROI	45.5%	33.3%
[31]	ROAS	32.2%	35.6%

APPENDIX EXHIBIT 109

LOWER-SPEND ADVERTISER SURVEY
COMPARISON OF RESPONDENTS WHO WOULD DIVERT VS. WOULD NOT DIVERT SPENDING IN RESPONSE TO DISPLAY COST INCREASE
EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

	Respondent Subgroup	Would Divert Spending in Q9 (N = 143)	Would Not Divert Spending in Q9 (N = 87)
	[A]	[B]	[C]
	Frequency of Measuring Performance		
[32]	Daily	7.7%	10.3%
[33]	Weekly	46.2%	44.8%
[34]	Monthly	31.5%	25.3%
[35]	Quarterly	11.2%	18.4%
[36]	Annually	3.5%	1.1%
	Use of Experiments		
[37]	Has run experiments in past year	69.2%	33.3%
[38]	Has not run experiments in past year	29.4%	65.5%

Notes & Sources:

From Lower-Spend Advertiser Survey.

[B] Respondents who, in Q9, indicated that they would divert advertising spending as a response to an increase in the cost of display advertising.

[C] Respondents who, in Q9, indicated that they would not divert advertising spending as a response to an increase in the cost of display advertising.

[1]-[4] Computed based on responses to QS3.

[5]-[6] Computed based on responses to QS4.

[7]-[8] Computed based on responses to QS11.

[9]-[14] Computed based on responses to QS10.

[15]-[25] Computed based on responses to QS12.

[26]-[27] Computed based on responses to Q2.

[28] Computed based on responses to Q8.

[29] Computed based on responses to Q4.

[30]-[31] Computed based on responses to Q12.

[32]-[36] Computed based on responses to Q14.

[37]-[38] Computed based on responses to Q15.

APPENDIX EXHIBIT 110

AGENCY SURVEY
COMPARISON OF RESPONDENTS WHO WOULD DIVERT VS. WOULD NOT DIVERT SPENDING IN RESPONSE TO PROGRAMMATIC DISPLAY COST INCREASE EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

	Respondent Subgroup	Would Divert Spending in Q4 (N = 185)	Would Not Divert Spending in Q4 (N = 132)
	[A]	[B]	[C]
	Age		
[1]	18 - 34	29.7%	17.4%
[2]	35 - 49	57.8%	67.4%
[3]	50 - 64	11.9%	15.2%
[4]	65 or above	0.5%	-
	Gender		
[5]	Female	29.7%	31.1%
[6]	Male	70.3%	68.2%
	Percent of Advertising Budget Spent on Digital		
[7]	Average	66.5%	63.6%
[8]	Median	70.0%	60.0%
	Annual Ad Spend		
[9]	$50,000 to less than $100,000	2.2%	0.8%
[10]	$100,000 to less than $250,000	2.7%	0.8%
[11]	$250,000 to less than $500,000	2.7%	0.8%
[12]	$500,000 to less than $1 million	9.2%	7.6%
[13]	$1 million to less than $3 million	14.1%	11.4%
[14]	$3 million to less than $7 million	17.3%	21.2%
[15]	$7 million to less than $15 million	10.8%	12.9%
[16]	$15 million to less than $30 million	16.2%	20.5%
[17]	$30 million to less than $50 million	7.0%	14.4%
[18]	$50 million to less than $100 million	5.4%	3.0%
[19]	$100 million to less than $250 million	8.1%	3.8%
[20]	$250 million to less than $500 million	1.6%	1.5%
[21]	$500 million or more	2.2%	1.5%

APPENDIX EXHIBIT 110

AGENCY SURVEY
COMPARISON OF RESPONDENTS WHO WOULD DIVERT VS. WOULD NOT DIVERT SPENDING IN RESPONSE TO PROGRAMMATIC DISPLAY COST INCREASE EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

	Respondent Subgroup	Would Divert Spending in Q4 (N = 185)	Would Not Divert Spending in Q4 (N = 132)
	[A]	[B]	[C]
	Advertising Types Used		
[22]	Search	78.9%	56.1%
[23]	Display	100.0%	100.0%
[24]	Email	52.4%	41.7%
[25]	Digital Audio	51.9%	27.3%
[26]	Social	84.9%	63.6%
[27]	App/In-App	44.3%	38.6%
[28]	Digital Video	74.1%	50.8%
[29]	Connected TV	60.0%	35.6%
[30]	eCommerce	50.3%	39.4%
[31]	Other	1.1%	-
[32]	***Average Number of Advertising Types Used***	6.0	4.5
	Use of Direct Deals		
[33]	Uses Direct Deals	53.5%	36.4%
[34]	Does Not Use Direct Deals	46.5%	63.6%
[35]	***Average % of Digital Budget Allocated to Programmatic Display***	23.4%	43.5%
[36]	***Use of Multiple Ad Buying Tools***	77.3%	61.4%
	Metrics Used to Measure Performance of Programmatic Display		
[37]	ROI	55.7%	40.2%
[38]	ROAS	50.3%	40.9%

APPENDIX EXHIBIT 110

AGENCY SURVEY
COMPARISON OF RESPONDENTS WHO WOULD DIVERT VS. WOULD NOT DIVERT SPENDING IN RESPONSE TO PROGRAMMATIC DISPLAY COST INCREASE EXCLUDING RESPONDENTS WHO SELECTED A DECOY OPTION

	Respondent Subgroup	Would Divert Spending in Q4 (N = 185)	Would Not Divert Spending in Q4 (N = 132)
	[A]	[B]	[C]
	Frequency of Measuring Performance		
[39]	Daily	5.9%	12.9%
[40]	Weekly	42.2%	37.9%
[41]	Monthly	34.6%	29.5%
[42]	Quarterly	13.5%	15.9%
[43]	Annually	3.8%	3.8%
	Use of Experiments		
[44]	Has run experiments in past year	68.1%	51.5%
[45]	Has not run experiments in past year	27.6%	46.2%

Notes & Sources:
From Agency Survey.
[B] Respondents who, in Q4, indicated that they would divert advertising spending for the client they spend the most time on as a response to an increase in the cost of programmatic display advertising.
[C] Respondents who, in Q4, indicated that they would not divert not advertising spending for the client they spend the most time on as a response to an increase in the cost of programmatic display advertising.
[1]-[4] Computed based on responses to QS3.
[5]-[6] Computed based on responses to QS4.
[7]-[8] Computed based on responses to QS13.
[9]-[21] Computed based on responses to QS12.
[22]-[32] Computed based on responses to QS14.
[33]-[34] Computed based on responses to QS15.
[35] Computed based on responses to Q3.
[36] Computed based on responses to Q7.
[37]-[38] Computed based on responses to Q16.
[39]-[43] Computed based on responses to Q18.
[44]-[45] Computed based on responses to Q19.